

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION
ORDER NO. R5-2002-XXX**

NPDES NO. CA0083526

FACT SHEET

**CITY OF MODESTO
STORM WATER DISCHARGES FROM
MUNICIPAL SEPARATE STORM SEWER SYSTEM
STANISLAUS COUNTY**

FACT SHEET

**Central Valley Regional Water Quality Control Board
National Pollutant Discharge Elimination System (NPDES)
Permit No. CAS0083526
Waste Discharge Requirements Order No. R5-2002-XXX
City of Modesto
Municipal Separate Storm Sewer System
Stanislaus County**

I PURPOSE

The purpose of this Fact Sheet is to give the Discharger and interested parties an overview of the proposed permit as well as to provide the technical basis for the permit requirements. Sections I through IV describe water quality problems from storm water and urban runoff, and permit conditions to address these problems. Sections V and VI discuss each major element of the Discharger's Storm Water Management Plan (SWMP), which also serves as a reference document during review of the permit.

II INTRODUCTION - THE NEED TO REGULATE STORM WATER DISCHARGES

A. Impacts

The quality of storm water and urban runoff are fundamentally important to the health of the environment and the quality of life in the Central Valley Region. Storm water and urban runoff (during dry and wet weather) are often polluted with pesticides, fertilizers, animal droppings, trash, food wastes, automotive byproducts, and many other toxic substances generated by urban environments. Water that flows over streets, parking lots, construction sites, and industrial, commercial, residential, and municipal areas carries these pollutants through the storm drain systems directly into the receiving waters of the Area. The water quality impacts and increased public health risks from municipal separate storm sewer system (MS4) discharges that affect receiving waters nationwide and in the Central Valley Region are well documented.

The **National Urban Runoff Program (NURP)** Study [U.S. Environmental Protection Agency EPA (U.S. EPA) 1983] showed that MS4 discharges draining from residential, commercial, and light industrial areas contain significant loadings of total suspended solids. Although the NURP Study did not cover industrial sites, the study suggested that runoff from industrial sites may have significantly higher contaminant levels than runoff from other urban land use sites. Several studies tend to support this observation. For example, in Fresno, a NURP project site, industrial areas had the poorest storm water quality of the four land uses evaluated. The study found that pollutant levels from illicit discharges were high enough to significantly degrade receiving water quality, and threaten aquatic life, wildlife, and human health.

The 1992, 1994, and 1996 National Water Quality Inventory Reports to Congress prepared by U.S. EPA showed a trend of impairment in the nation's waters from contaminated storm water and urban runoff. The recent 1998 National Water Quality Inventory [305(b) Report]¹ showed that urban runoff/storm water discharges affect 11% of rivers, 12% of lakes, and 28% of estuaries. The report notes that urban runoff and storm water discharges are the leading source of pollution and the main factor in the degradation of surface water quality² in California's rivers and streams.

The Natural Resources Defense Council (NRDC) 1999 report, *Stormwater Strategies, Community Responses to Runoff Pollution*³ identifies two main causes of the storm water pollution problem in urban areas. Both causes are directly related to development in urban and urbanizing areas:

1. Increased volume and velocity of surface runoff. There are three types of human-made impervious covers that increase the volume and velocity of runoff: (i) rooftop, (ii) transportation imperviousness, and (iii) non-porous (impervious) surfaces. As these impervious surfaces increase, infiltration will decrease, forcing more water to run off the surface, picking up speed and pollutants.
2. The concentration of pollutants in the runoff. Certain activities, such as those from industrial sites, are large contributors of pollutant concentrations to the storm water system.

The report also identified several activities causing storm water pollution from urban areas, practices of homeowners, businesses, and government agencies.

More recent studies conducted by United States Geological Survey (USGS)⁴ confirmed the link between urbanization and water quality impairments in urban watersheds due to contaminated storm water runoff.

Furthermore, the water quality impacts of urbanization and urban storm water discharges have been summarized by several other recent U.S. EPA reports.⁵ Urbanization causes changes in hydrology and increases pollutant loads, which adversely impact water quality, and impairs the beneficial uses of receiving waters.

¹ *Quality of Our Nation's Waters: Summary of the National Water Quality Inventory 1998 Report to Congress* - U.S. EPA 841-S-00-001 - June 2000; *Water Quality Conditions in the United States: Profile from the 1998 National Water Quality Inventory Report to Congress* - U.S. EPA 841-F-00-006 - June 2000

² *Quality of Our Nation's Waters: Summary of the National Water Quality Inventory 1998 Report to Congress*, Chapter 12 State and Territory Summaries, California., pp. 282-83: 1998.

³ *Clean Water & Oceans: Water Pollution: In Depth Report Stormwater Strategies, Community Responses to Runoff Pollution*. Natural Resources Defense Council (NRDC), 1999.

⁴ *Water Quality in the Puget Sound Basin, Washington and British Columbia, 1996-98*, Circular 1216 - USGS 2000; *Water Quality in the Long Island-New Jersey Coastal Drainages, New Jersey and New York, 1996-98*, Circular 1201 - USGS 2000

⁵ *Storm Water Phase II Report to Congress* (U.S. EPA 1995); *Report to Congress on the Phase II Storm Water Regulations* (U.S. EPA 1999); *Coastal Zone Management Measures Guidance* (U.S. EPA 1992)

Increases in population density and imperviousness result in changes to stream hydrology including:

1. Increased peak discharges compared to predevelopment levels;
2. Increased volume of storm water runoff with each storm compared to pre-development levels;
3. Decreased travel time to reach receiving water; increased frequency and severity of floods;
4. Reduced stream flow during prolonged periods of dry weather due to reduced levels of infiltration;
5. Increased runoff velocity during storms due to a combination of effects of higher discharge peaks, rapid time of concentration, and smoother hydraulic surfaces from channelization; and
6. Decreased infiltration and diminished groundwater recharge.

B. Benefits of Permit Program Implementation

Implementation of the MS4 permit requirements will significantly reduce pollutants in urban storm water in a cost-effective manner. Implementation of Best Management Practices (BMPs) should also reduce pollutant discharges, and improve surface water quality. The expected benefits of implementing the provisions of the City of Modesto MS4 National Pollutant Discharge Elimination System (NPDES) permit include:

1. **Enhanced Aesthetic Value:** Storm water affects the appearance and quality of a water body, and the desirability of working, living, traveling, or owning property near that water body. Reducing storm water pollution will increase benefits as these water bodies recover and become more desirable.
2. **Enhanced Opportunities for Boating:** reducing sediment and other pollutants, and increasing water clarity, which enhances the boating experience for users, offer additional benefits.
3. **Enhanced Commercial Fishing:** Important because commercial fisheries are a significant part of the nation's economy, and 28% of the estuaries in the 305(b) Report were impacted by storm water/urban runoff.
4. **Enhanced Recreational and Subsistence Fishing:** Pollutants in storm water can eliminate or decrease the numbers, or size, of sport fish and shellfish in receiving waters.
5. **Reduced Flood Damage:** Storm water runoff controls may mitigate flood damage by addressing problems due to the diversion of runoff, insufficient

storage capacity, and reduced channel capacity from sedimentation.

6. **Reduced Illness from Consuming Contaminated fish:** Storm water controls may reduce the presence of pathogens in fish caught by commercial or recreational anglers.
7. **Reduced Illness from Swimming in Contaminated Water:** Epidemiological studies indicate that swimmers in water contaminated by storm water runoff are more likely to experience illness than those who swim farther away from a storm water outfall.
8. **Enhanced Opportunities for Non-contact Recreation:** Storm water controls reduce turbidity, odors, floating trash, and other pollutants, which then allow waters to be used as focal point for recreation, and enhance the experience of the users.
9. **Drinking Water Benefits:** Pollutants from storm water runoff, such as solids, toxic pollutants, and bacteria may pose additional costs for treatment, or render the water unusable for drinking.
10. **Water Storage Benefits:** Storm water is a major source of impairment for reservoirs. The heavy load of solids deposited by storm water runoff can lead to rapid sedimentation of reservoirs and the loss of needed water storage capacity.⁶

III STATUTORY AND REGULATORY HISTORY OF THE STORM WATER PROGRAM

A. Basis for Permit Conditions

Over the past 29 years, water pollution control efforts have focused primarily on certain process wastewater discharges from facilities such as factories and sewage treatment plants, with less emphasis on diffuse sources. The 1972 amendments to the Federal Clean Water Act (CWA) prohibit the discharge of any pollutant to waters from a point source, unless a NPDES permit authorizes the discharge. Because the focus on reducing pollutants was centered on industrial and sewage treatment discharges, the U.S. Congress amended the CWA in 1987, requiring the U.S. EPA to create phased NPDES requirements for storm water discharges.

In response to the 1987 Amendments to the CWA, the U.S. EPA developed Phase I of the NPDES Storm Water Program in 1990. Phase I requires NPDES permits for storm water discharges from: (i) "medium" and "large" MS4s generally serving, or located

⁶Report to Congress on Phase II Storm Water Regulations. U.S. EPA, Office of Water. EPA-833-R-99-001, Oct. 1999.

in incorporated places or counties with, populations of 100,000 or more people; and
(ii) eleven categories of industrial activity (including construction activity that disturbs five acres or greater of land).

Phase II, adopted in December 2000 and scheduled to take effect in March 2003, requires operators of small MS4s and small construction sites (construction activity disturbing between 1 and 5 acres of land) in urban areas to control storm water runoff discharges. Phase II establishes a cost-effective approach for reducing environmental harm caused by storm water discharges from previously unregulated diffuse sources.

B. Statutory Basis for Permit Conditions

The conditions established by this permit are based on Section 402(p)(3)(B) of the CWA which mandates that a permit for discharges from MS4s must: effectively prohibit the discharges of non-storm water to the MS4; and require controls to reduce pollutants in discharges from MS4 to the maximum extent practicable (MEP) including best management practices, control techniques, and system design and engineering methods, and such other provisions determined to be appropriate. MS4s are not exempted from compliance with Water Quality Standards. Section 301(b)(1)(C) of the CWA requiring that NPDES permits include limitations, including those necessary to meet water quality standards, applies. The intent of the permit conditions is to meet the statutory mandate of the CWA.

The permit requires the implementation of a comprehensive SWMP through a selection of BMPs [40 Code of Federal Regulations (CFR) 122.44(k)] as the mechanism to achieving the reduction of pollutants in storm water to the maximum extent practicable (MEP) [CWA. § 402(p)(3)(B)(iii)].

C. Regulatory Basis for Permit Conditions.

As a result of the statutory requirements of the CWA, the U.S. EPA promulgated the MS4 Permit application regulations, 40 CFR 122.26(d). These regulations described in detail the permit application requirements for MS4s operators. The information in the Report of Waste Discharge was utilized to develop the permit conditions and determine the Discharger's status in relationship to these conditions.

D. Discharge Limitations

No numeric effluent limitations are proposed at this time. In accordance with 40 CFR 122.44(k), the U.S. EPA has required a series of increasingly more effective BMPs⁷, in the form of a comprehensive SWMP and performance standards, in lieu of numeric limitations.

E. Consistency with Other MS4 Permits

In February 2001, the San Diego Regional Water Quality Control Board adopted Waste Discharge Requirements Order No. 2001-01 for Discharges of Urban Runoff

⁷ Interpretative Policy Memorandum on Reapplication Requirements of MS4s issued by U.S. EPA (61 Fed. Reg. 41697)

from the MS4s of San Diego County, Incorporated cities of San Diego County, and the San Diego Unified Port District. In December 2001, the Los Angeles Regional Water Quality Control Board (LA Regional Board) adopted Waste Discharge Requirements Order No. 01-182 for Municipal Storm Water and Urban Runoff Discharges within Los Angeles County and incorporated cities therein.

We have incorporated portions of the San Diego and Los Angeles MS4 permits that are applicable to the Modesto MS4 permit. Those permits are available at www.swrcb.ca.gov/rwqcb9/Programs/Storm_Water/storm_water.html and www.swrcb.ca.gov/rwqcb4/html/programs/stormwater/la_ms4_final.html.

IV BACKGROUND - CITY OF MODESTO MS4

A. City of Modesto MS4 Permit History

The City of Modesto submitted a Report of Waste Discharge (ROWD) in December 1998 and requested re-issuance of the Waste Discharge Requirements (WDR) under the National Pollution Discharge Elimination System (NPDES) area-wide municipal storm water permit.

Prior to the issuance of this Order, the City of Modesto was covered under the NPDES area-wide MS4 permit, Order No. 94-163 (NPDES No.CA0083526) adopted in June 1994.

The Discharger has jurisdiction over and/or maintenance responsibility for the MS4 that it owns and/or operates in Stanislaus County. The discharge consists of the surface runoff generated from various land uses in all the hydrologic sub-basins, which discharge into either storm sewers or rock wells. The City is at the confluence of Dry Creek and the Tuolumne River. The existing drainage system covers 6650 acres with 18 major outfalls. These outfalls discharge storm water either to Dry Creek, the Tuolumne River or Modesto Irrigation District (MID) Lateral Canal No. 3. MID Lateral No. 3 and Dry Creek are tributary to the Stanislaus River.

B. City of Modesto Storm Drain System

The City of Modesto is located at the confluence of Dry Creek and the Tuolumne River. The existing drainage system covers 6650 acres with 18 major outfalls. These outfalls discharge storm water either to Dry Creek, the Tuolumne River or Modesto Irrigation District (MID) Lateral Canal No. 3. MID Lateral No. 3 and Dry Creek are tributary to the San Joaquin River.

In about one-third of Modesto, the storm water runoff is discharged to surface waters. In the remaining two-thirds of the City, the storm water runoff is discharged to rock wells. Surface water discharges occur generally in the older areas of the City or those areas immediately adjacent to the Tuolumne River, Dry Creek or irrigation canals.

There are portions of the City that are mainly agricultural, rural and open space land uses. It is not the intent of the federal storm water regulations to regulate storm water discharges from land uses of these types. Therefore, these areas are exempt from the requirements of this Order.

C. Total Maximum Daily Loads (TMDLs)

TMDLs are one of the Regional Board's highest priorities. In view of the Modesto Area, it is likely that pollutants in storm water will be allocated significant load reductions. While specific load reductions cannot be forecast at this time, the Regional Board does envision that storm water permits will be an important mechanism for implementing load reductions.

Both the San Joaquin River and the Lower Tuolumne River are listed as impaired water bodies pursuant to Section 303(d) of the CWA. Also, downstream of the San Joaquin and the Lower Tuolumne River, the Delta Waterways are listed as a water quality impaired water body. Regional Board staff are currently developing TMDLs for the San Joaquin River. The San Joaquin River is listed as impaired due to boron, chlorpyrifos, DDT, diazinon, electrical conductivity, Group A pesticides, selenium, and unknown toxicity. The Lower Tuolumne River is listed as impaired due to diazinon, Group A pesticides, and unknown toxicity. Once the Regional Board and U.S. EPA approve TMDLs, and if applicable, the Discharger's storm water NPDES permit may be modified to reflect the load allocation established by TMDLs.

The proposed permit specifies that the Discharger amend the SWMP to comply with load allocations approved pursuant to adoption and approval of TMDLs. The addition of this provision represents a significant difference from the existing permit, which does not contain a provision for implementation of TMDLs. In addition, the proposed permit requires the Discharger to submit work plans to address the dissolved oxygen, pathogens, and pesticide impairment of the aforementioned water bodies resulting from storm water and urban discharges.

V STORM WATER MANAGEMENT PROGRAM ELEMENTS

Regulations in 40 CFR 122.26(d)(2)(iv) provide that, "A proposed management program covers the duration of the permit. It shall include a comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate. The program shall also include a description of staff and equipment available to implement the program."

As part of their application for permit renewal, the Discharger has submitted a SWMP describing the framework for management of storm water discharges during the term of this permit. The SWMP provides the goals and objectives, legal authorities, source identification

process, funding sources, best management practices (BMPs) evaluation and improvement process, and a monitoring plan. The SWMP includes the following major program components:

- Legal Authority
- Program Management
- Construction Program
- Industrial and Commercial Program
- Municipal Operations Program
- Illicit/Illegal Discharge Program
- Public Education and Outreach Program
- Monitoring Plan
- Fiscal Analysis
- Performance and Effectiveness Evaluation
- Water Quality Based Programs
- Development Standards

Some of these program elements and the corresponding proposed permit requirements under those elements are discussed below.

A. Program Management

The proposed permit requires submission of an Annual Work Plan by 1 April of each year. The Annual Work Plan provides the SWMP's and the Discharger's proposed activities for the upcoming year beginning 1 July of current year and ending 30 June the following year. The proposed permit also requires submission of an Annual Report by 1 September of each year. The Annual Report documents the status of the SWMP's and the Discharger's activities during the previous fiscal year, including the results of a qualitative and quantitative field level assessment of activities implemented by the Dischargers, and the performance of tasks contained in the SWMP. The Annual Report includes a compilation of deliverables and milestones completed during the previous 12-month period, as described in the SWMP and Annual Work Plan.

B. Construction Program

Legal Authority

Regulations in 40 CFR 122.26(d)(2)(iv)(D) provide that a proposed management program must include "a description of a program to implement and maintain

structural and non-structural best management practices to reduce pollutants in storm water runoff from construction sites to the municipal storm sewer system.”

Background

As stated in the California Storm Water Best Management Practice Handbook for Construction Activity (BMP Handbook), “Construction usually increases the amount of impervious area causing more of the rainfall to runoff, and increasing the speed at which runoff occurs. Unless properly managed, this increased runoff will erode natural and/or unprotected watercourses causing the watercourse to widen...Sedimentation can also contribute to accelerated filling of reservoirs, harbors, and drainage systems.”⁸

The prevention of erosion is a key objective to the proposed modifications to the construction program under this draft Order. The Discharger currently oversees construction sites within its jurisdiction. The Discharge is ultimately responsible for what enters and exits the portion of the storm drain system that they own and/or operate. It is in the best interest of the Discharger to become familiar with what enters their system and to control as necessary the discharges allowed into their storm drain system.

Specific significant changes in the draft permit are described below:

REQUIREMENT: The draft permit requires that the Discharger promote the use of effective erosion and sediment controls at construction sites regardless of size.

JUSTIFICATION: The need for proper erosion and sediment controls is very apparent during and immediately after rain events. The environmental effects of erosion are well documented. Erosion can be prevented or reduced with the proper planning and implementation of appropriate BMPs.

REQUIREMENT: Requirements for structural source control and non-structural BMPs for controlling runoff at construction sites.

JUSTIFICATION: Erosion occurs when land is exposed and soils are mobilized. With adequately engineered and implemented structural or non-structural BMPs, the detrimental environmental effects can be eliminated or minimized. Currently, there are many guidance manuals, handbooks, and classes available to developers. Regional Board staff have provided and will continue to provide information on how to access these materials and training classes to the Discharger, developers, trade groups and the Building Industry Association in Modesto.

REQUIREMENT: The Discharger shall implement a process to review, approve, and enforce any erosion control plan submitted to the Discharger for implementation

⁸ *California Storm Water Best Management Practice Handbook for Construction Activity*. 1993.

at construction sites, regardless of size and General Construction Permit coverage of the sites.

JUSTIFICATION: The Discharger must enforce local storm water ordinances at construction sites to prevent erosion. They should not wait for a discharge to react with an enforcement action.

REQUIREMENT: For sites that require a construction storm water permit, Discharger is required to ensure that a Notice of Intent (NOI) has been filed with the State Board prior to issuing a grading permit. This requirement also applies to land transfers between developers on common plans of sale or development.

JUSTIFICATION: This ensures that a site must first obtain coverage under the General Construction Permit before a grading permit is issued.

REQUIREMENT: Wet weather inspections are required of all construction sites covered under the General Construction permit. The Discharger needs to conduct wet weather inspections to ensure compliance with local ordinances.

JUSTIFICATION: Inspecting all sites allows the Discharger to: (1) Ascertain compliance with their ordinance, this Order, and the General Construction Permit (for sites that are covered); (2) Focus on educating and issuing enforcement actions on problem sites; and (3) Refer problem sites to the Regional Board for further enforcement.

C. Industrial and Commercial Program

Legal Authority

Regulation 40 CFR 122.26(d)(2)(iv)(C), A description of a program to monitor and control pollutants in storm water discharges to municipal systems from municipal landfills, hazardous waste treatment, disposal and recovery facilities, industrial facilities that are subject to section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), and **industrial facilities** that the municipal permit applicant determines are **contributing a substantial pollutant loading to the municipal storm sewer system**. The program shall:

1. Identify priorities and procedures for **inspections and establishing and implementing control measures** for such discharges;
2. Describe a **monitoring program** for storm water discharges associated with industrial facilities [...]

Background

The municipality is ultimately responsible for discharges from the MS4. Because industrial awareness of the program may not be complete, there may be facilities within the MS4 area that should be permitted but are not (non-filers). In addition, the Phase I regulations that require industries to obtain permit coverage for storm water discharges is largely based on SIC Code. This has been shown to be incomplete in identifying industries that may be significant sources of storm water pollution (*by industries we also mean commercial businesses. The word "industries" is used in a broad sense*). Another concern is that the permitting authority may not have adequate resources to provide the necessary oversight of permitted facilities. Therefore, it is in the municipality's best interest to assess the specific situation and implement an industrial/commercial inspection/site visit and enforcement program to control the contribution of pollutants to the MS4 from all these sources.

In the preamble to the 1990 regulations, the U.S. EPA clearly states the intended strategy for discharges of storm water associated with industrial activity:

"...Municipal operators of large and medium municipal separate storm sewer systems are responsible for obtaining system-wide or area permits for their system's discharges. These permits are expected to require that controls be placed on storm water discharges associated with industrial activity which discharge through the municipal system." The U.S. EPA also notes in the preamble that *"... municipalities will be required to meet the terms of their permits related to industrial dischargers."*

Similarly, in the U.S. EPA's Guidance Manual¹ (Chapter 3.0), it is specified that MS4 applicants must demonstrate that they possess adequate legal authority to:

- Control construction site and other industrial discharges to MS4s;
- Prohibit illicit discharges and control spills and dumping;
- Carry out inspection, surveillance, and monitoring procedures.⁹

The document goes on to explain that *"control"*, in this context means not only to require disclosure of information, but also to *limit, discourage, or terminate* a storm water discharge to the MS4. Further, to satisfy its permit conditions, a municipality may need to impose additional requirements on discharges from permitted industrial facilities, as well as discharges from industrial facilities and construction sites *not* required to obtain permits.

In the same Guidance Manual¹⁰ (Chapter 6.3.3), it is stated that the municipality is ultimately responsible for discharges from their MS4. Consequently, the MS4 applicant must describe how the municipality will help the U.S. EPA and authorized NPDES States to:

⁹ *Guidance Manual For the Preparation of Part 2 of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems* - U.S. EPA -November 1992

¹⁰ *Id.*

- Identify priority industries discharging to their systems;
- Review and evaluate storm water pollution prevention plans (SWPPPs) and other procedures that industrial facilities must develop under general or individual permits;
- Establish and implement BMPs to reduce pollutants from these industrial facilities (or require industry to implement them); and
- Inspect and monitor industrial facilities discharging storm water to the municipal systems to ensure these facilities are in compliance with their NPDES storm water permit, if required.

Discussion

Recognizing that the municipality is ultimately responsible for the quality of storm water discharges in the MS4, the municipalities must evaluate the industrial/commercial facilities and determine their compliance with the permit requirements, as well as their contribution to the MS4 and potential impacts to the receiving waters. The following areas must be addressed in order to implement a meaningful industrial/commercial inspection/site visit and enforcement program:

- **Source Identification**
- **Pollution Prevention**
- **Threat to Water Quality**
- **Through existing ordinance, order or similar means**

It may be necessary to update existing ordinances if they do not provide sufficient legal authority to implement the above mentioned components as required by the regulations.

Integration of NPDES Program for MS4 with NPDES Program for Industrial Activities

Recognizing the dual coverage envisioned by the U.S. EPA regulations¹¹, and suggested partnership between local and State authorities, municipalities shall coordinate with State activities for the implementation of the General Industrial Permit. The goal is to control industrial sources and other sources not specifically covered under Phase I storm water regulations but identified as significant contributors of pollutants by the municipalities through their identification and prioritization studies. The net result should be a better and improved coordinated program with greater impact on limiting and eliminating (as a final goal) the contribution of pollutants to the receiving water while maintaining and/or restoring the capacity of the receiving water to sustain the beneficial uses without impairments.

Based on the dual coverage and partnership approach between the permitting authority and municipalities that the U.S. EPA called for in the storm water

¹¹ Federal Register Vol. 55, No 222, pp. 48000; U.S. EPA Storm Water Phase II Compliance Assistance Guide, 2000, pp. 4-32 and 5-11, where it clarifies the dual responsibility

regulations (see letters from Alexis Strauss, U.S. EPA Water Division Director)^{12,13}, and in order to best use limited resources at the State and local levels, the draft permit includes improvements requiring the Discharger to: (i) Control the storm water discharges associated with industrial activities and other commercial facilities identified as significant contributors of pollutants; and (ii) Assist the Regional Board in implementing the general permit for industrial activities. This approach is consistent with the nationwide approach used by the U.S. EPA in issuing *second term* MS4 permits¹⁴. Also, this approach is consistent with other MS4 permits issued in California: San Diego and Santa Clara permits. The education and outreach should be continued under the auspices of the Public Education program.

The strategy as outlined in the draft permit builds on the State/municipalities partnership by focusing their limited resources on the following activities:

- The Discharger will take a lead role in inspecting restaurants, automotive service facilities, retail gasoline outlets, industrial facilities mandated specifically by the regulations;
- The Regional Board will be the lead agency for inspections of facilities covered or in need of coverage under the General Industrial Permit;
- The Discharger will assist the Regional Board in its activities to fully enforce the General Industrial Permit through spot check inspections, referrals, data information research, joint inspections;
- The Regional Board and The Discharger will coordinate their information systems and task scheduling to avoid duplication and strengthen their inspections activities.

D. Municipal Operations Program

Legal Authority

Regulations 40 CFR 122.26(d)(2)(iv)(A)(1,3,4,5,and 6) require that the Discharger must develop a program to reduce the discharge of pollutants to and from the MS4 to the maximum extent practicable for all urban land uses and activities, including municipal areas and activities.

Background

¹² Letter dated December 19, 2000, from Alexis Strauss, Director, Water Division, U.S. EPA Region IX, to Dennis Dickerson, Executive Officer, Regional Water Quality Control Board-Los Angeles Region.

¹³ Letter dated April 30, 2001, from Alexis Strauss, Director, Water Division, U.S. EPA Region IX, to Honorable Stephen Horn, U.S. House of Representatives

¹⁴ MS4 NPDES Permits issued to Palm Beach County, Broward County, Sarasota County, Florida, Tulsa, Oklahoma, Denver, Colorado.

Many Permittees provide services that ultimately result in the enhancement of the lives of the residents. Some of these services include but are not limited to: sewage system operations; public construction activities; vehicle maintenance; material storage; street and road maintenance; landscaping; recreational facility management; parking facility management; public industrial activities; and many other activities.

Specific changes in the draft permit:

REQUIREMENT: The proposed change requires that the Discharger be required to implement a response plan in case of an overflow of the sewage system to the storm drain system.

JUSTIFICATION: Prevent sewage spills into MS4s.

REQUIREMENT: The requirements in the construction section of the draft permit also apply to the Discharger's public construction sites.

JUSTIFICATION: A public construction site is subject to and must comply with storm water regulations, and should be a model of what to do efficiently and effectively.

REQUIREMENT: The Discharger with a construction site that meets the size requirements for a General Construction Permit shall obtain a permit from the State for the construction activity. Currently the size threshold is five acres but will change to one acre on 10 March 2003.

JUSTIFICATION: This change is consistent with U.S. EPA Phase II storm water regulations, and will assist in the tracking of construction sites operated by The Discharger.

REQUIREMENT: The Discharger will be required to ensure that public facilities are designed and constructed using construction and post-construction BMPs consistent with the Standard Urban Storm Water Mitigation Plans (SUSMPs) required under the Construction Planning section of the draft permit.

JUSTIFICATION: This requirement ensures consistency with the planning, design, and construction requirements for public projects.

REQUIREMENT: For Permittee owned or operated vehicle maintenance, material storage areas, and corporation yards the Discharger will implement site specific SWPPPs to minimize pollutant discharges in storm water discharges. Vehicle and equipment wash areas will be required to be self contained or covered, equipped with a clarifier, or other pretreatment device, and or properly connected to the sanitary sewer. This requirement will take effect when a new facility is constructed or when an existing site is remodeled or reconstructed.

JUSTIFICATION: This provision ensures that the planning of public projects is treated the same as that of private projects.

REQUIREMENT: The Discharger is required to conduct a study to investigate the possible diversion of dry weather discharges or the use of alternate treatment control BMPs to treat storm water from their jurisdiction.

JUSTIFICATION: The purpose of the requirement is to have the prioritized list of dry weather discharges that could be diverted or treated.

E. Illicit/Illegal Discharge Program

Legal Authority

Regulations in 40 CFR 122.26(d)(2)(iv)(B) states, “A proposed management program shall be based on a description of a program, including a schedule, to detect and remove (or require the discharger to the municipal storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer.” It states further that the Discharger must include in its proposed management program a program, including inspections, to implement and enforce an ordinance, orders or similar means to prevent illicit discharges to the municipal storm sewer system.

Background:

During dry weather, much of the discharge to storm drain systems consists of wastes and wastewater from non-storm water sources. A significant amount of such discharges may be from illicit discharges or connections, or both. Illicit discharges may occur either through direct connections, such as deliberate or mistaken piping, or through indirect connections, such as dumping, spillage, subsurface infiltration, and washdowns.

The objective of a municipality's illicit connection/illicit discharge (IC/ID) elimination program should be to detect illicit connections and illicit discharges to the storm drain system, and to promptly eliminate such discharges and connections. Municipalities typically employ the approaches listed below to achieve this objective:

1. Permitting connections to the municipal storm drain.
2. Mapping the storm drain system, locations of catch basins, outfalls, permitted connections, and the names and locations of all waters of the U.S. that receive discharges from the outfalls.
3. Adopting a storm water/ urban runoff ordinance to prohibit unauthorized non-storm water discharges into the MS4, and implementing appropriate enforcement procedures and actions.

4. Implementing a program to detect and eliminate non-storm water discharges to the MS4, including illegal dumping.
5. Educating public employees, businesses, and the general public about the dangers associated with illegal discharges and improper disposal.
6. Establishing a public reporting hotline or other mechanism to report illicit discharges and illegal dumping.
7. Establishing measurable goals to evaluate successful program implementation.

Proposed IC/ID Elimination Program

The proposed permit requires the Discharger to revise their IC/ID Elimination Program in the SQMP to meet the following proposed requirements in the draft permit:

1. General requirements, among which include a development (if necessary) and updating of a list of permitted connections to the storm drain system, a tracking system for illicit connections and discharges, and compilation, coordination of this information by the Discharger, as well as identification of priority areas for proactive screening.
2. Illicit connection requirements
 - Proactive screening of the storm drain system over a 5-year period, including: Field screening of open channels and underground pipes (with a diameter of 36 inches or greater);
 - Permit screening, to ensure that all connections are effectively implementing the prohibition on non-storm water discharges. Requirements to investigate and terminate illicit connections, including response times.
3. Illicit discharge requirements, specifying response times for abatement and cleanup (within one business day), and investigation (as soon as practicable).

F. Public Outreach and Public Education Program

Legal Authority

Regulations in 40 CFR 122.26(d)(2)(iv)(A)(6) provide that the proposed management program include, "A description of a program to reduce to the maximum extent practicable, pollutants in discharges from MS4s associated with the application of

pesticides, herbicides, and fertilizer which will include, as appropriate, controls such as educational activities, permits, certifications, and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities.” In addition, regulations in 40 CFR 122.26(d)(2)(iv)(B)(6) provide that the proposed management program include, “A description of education activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials.”

To satisfy the Public Education and Outreach minimum control measure, the Discharger needs to: (i) implement a public education program to distribute educational materials to the community, or conduct equivalent outreach activities about the impacts of storm water discharges on local waterbodies and the steps that can be taken to reduce storm water pollution; and (ii) determine the appropriate BMPs and measurable goals for this minimum control measure.

Background

Implementation of a Public Outreach Program is a critical BMP and a necessary component of a storm water management program. The State Board Technical Advisory Committee "recognizes that education with an emphasis on pollution prevention is the fundamental basis for solving nonpoint source pollution problems." The U.S. EPA Phase II Fact Sheet 2.3 (Fact Sheet 2.3) finds that "An informed and knowledgeable community is critical to the success of a storm water management program since it helps insure the following: (i) greater support for the program as the public gains a greater understanding of the reasons why it is necessary and important, and (ii) greater compliance with the program as the public becomes aware of the personal responsibilities expected of them and others in the community, including the individual actions they can take to protect or improve the quality of area waters."¹⁵

Furthermore, the public can provide valuable input and assistance to a municipal storm water management program and, therefore, should play an active role in the development and implementation of the program. An active and involved community is essential to the success of a storm water management program because it allows for:

- Broader public support since residents who participate in the development and decision making process are partially responsible for the program and, therefore, are more likely to take an active role in its implementation;
- Shorter implementation schedules due to fewer obstacles in the form of public and legal challenges and increased sources in the form of residents volunteers;
- A broader base of expertise and economic benefits since the community can be a valuable, and free, intellectual resource; and
- A conduit to other programs as residents involved in the storm water program development process make important cross-connections and relationships with

¹⁵ Storm Water Phase II Final Rule - Public Education and Outreach Minimum Control Measure. U.S. EPA Fact Sheet 2.3, January 2000.

other community and government programs. This benefit is particularly valuable when trying to implement a storm water program on a watershed basis, which is encouraged by the U.S. EPA.

Discussion

Based on the background information, the Discharger should continue their educational storm water and urban runoff outreach programs. According to the U.S. EPA, materials and activities should be relevant to local situations and issues, and incorporate a variety of strategies to ensure maximum coverage.¹⁶ To help address local situations and sources of specific pollutants, the Public Outreach Program requires specific programs for targeted communities, for example, ethnic groups, retail gasoline outlets (RGOs), and restaurants, that may not be reached by or understand existing storm water educational materials. In an effort to reach these groups the Public Outreach Program must require the development of a strategy to provide outreach information including bilingual materials to target ethnic communities. The U.S. EPA encourages partnerships and cooperation.¹⁷ The proposed permit requires coordination between the Discharger and other agencies. It is generally more cost-effective to have numerous operators coordinate to use an existing program than all developing their own local programs. Furthermore, directing materials or outreach programs toward specific groups of commercial, industrial, and institutional entities likely to have significant storm water impacts is recommended.¹⁸ The next step in this targeted outreach program is education of specific businesses to facilitate employee compliance. Therefore, the permit requires implementation of a business outreach program to educate management and employees at gas stations and restaurant chains about storm water regulations.¹⁹ Also, a non-regulatory business assistance program would encourage small businesses that lack access to the expertise necessary to comply with storm water regulations and to implement pollution prevention measures. The business assistance program is not a requirement, however, its implementation is encouraged.

Program Performance Measure

The current public information program does not include a protocol to measure the effectiveness of the different public education efforts. Therefore, the draft permit includes requirements to measure the outcome of outreach efforts and demonstrate that they are effective at increasing knowledge and changing the behavior of the public in regards to storm water pollution. The proposed permit includes requirements for the Discharger to develop a strategy for measuring the effectiveness of different educational programs and to develop a behavioral change target that will become a performance measure that must be reported in Annual Reports.

In addition, the Discharger is also required to: (a) ensure that a minimum number of

¹⁶ Phase II Fact Sheet 2.3

¹⁷ *Id.*

¹⁸ Phase II Fact Sheet 2.3

¹⁹ Order No. R5-2002-XXX

impressions per year are made on the general public about storm water via print, local TV access, local radio, or other appropriate media; and (b) provide all school districts within their jurisdiction with materials, including videos, live presentations, brochures, and other media necessary to educate a minimum of fifty percent of all school children (K-12) every two years on storm water pollution. These performance measures are justified based on their consistency with requirements in the City of Los Angeles, City of Long Beach, and Ventura County MS4 permits.

The proposed permit requires the Discharger to ensure a minimum of 600,000 impressions on the residents of the Modesto Area. This requirement is consistent with the number of impressions (3 - 3.5 per resident) required in the Los Angeles, Long Beach, and the Ventura County MS4 permits.

G. Water Quality Based Program

Clean Water Act Section 303(d) and 40 CFR 130.7 require states to identify water quality-impaired water bodies and pollutants of concern, and develop Total Maximum Daily Loads (TMDLs). A TMDL is a quantitative assessment of the total pollutant load that can be discharged from all sources each day while still meeting water quality objectives. The Regional Board is currently in the process of developing TMDLs for listed water bodies within the Region. Once the Regional Board and U.S. EPA approve TMDLs, the Discharger's discharge of storm water into an impaired water body will be subject to load allocations and implementation plans established under the TMDLs. Certain early actions and/or assessments by the Discharger to address 303(d) listed water bodies and constituents are warranted and required by this Order.

Both the San Joaquin River and the Lower Tuolumne River are listed as impaired water bodies pursuant to Section 303(d) of the CWA. Also, downstream of the San Joaquin and the Lower Tuolumne River, the Delta Waterways are listed as a water quality impaired water body. Regional Board staff are currently developing TMDLs for the San Joaquin River. The San Joaquin River is listed as impaired due to boron, chlorpyrifos, DDT, diazinon, electrical conductivity, Group A pesticides, selenium, and unknown toxicity. The Lower Tuolumne River is listed as impaired due to diazinon, Group A pesticides, and unknown toxicity. Once the Regional Board and U.S. EPA approve TMDLs, and if applicable, the Discharger's storm water NPDES permit may be modified to reflect the load allocation established by TMDLs.

In addition, during the previous permit term oxygen demanding substances (such as copper, lead, zinc and total petroleum hydrocarbon) were detected frequently and were considered Constituent of Concerns.

To address these water quality impairments, the proposed permit requires the Discharger to conduct studies to determine the sources of impairment of those water bodies.

H. Development Standards

Impacts from New Development:

Treatment control BMP requirements on new development and redevelopment offer the most cost-effective strategy to reduce pollutant loads to surface waters. Retrofit of existing development will be expensive and may be considered on a targeted basis. Studies on the economic impacts of watershed protection indicate that storm water quality management has a positive or at least neutral economic effect while greatly improving the quality of surface waters.²⁰

U.S. EPA storm water regulations at 40 CFR 122.26 require that pollutants in storm water be reduced to MEP. The U.S. EPA's definition is intentionally broad to provide maximum flexibility in MS4 permitting and to give municipalities the opportunity to optimize pollutant reductions on a program-to-program basis.²¹ The definition of MEP has generally been applied to mean implementation of economically achievable management practices. Because storm water runoff rates can vary from storm to storm, the statistical probabilities of rainfall or runoff events become economically significant and are central to the control of pollutants through cost effective BMPs. Further, it is recommended that storm water BMPs be designed to manage both flows and water quality for best performance.²² It is equally important that treatment BMPs once implemented be routinely maintained.

Financing the MS4 program offers a considerable challenge for municipalities. A proven successful financing mechanism is the establishment of a storm water utility.²³ Utility fees, which are assessed on the property owner based on some estimate of storm water runoff generated for the site, are a predictable and dedicated source of funds. Utility fees can also provide a mechanism to provide incentives to commercial and industrial property owners to reduce impervious surface areas. Such incentives offer flexibility to property owners to choose the better economic option – paying more fees or making improvements to reduce runoff from the site.

Review of Design Standards:

The American Society of Civil Engineers (ASCE) and the Water Environment Federation (WEF) have recommended a numerical BMP design standard for storm water that is derived from a mathematical equation to maximize treatment of runoff volume for water quality based on rainfall/ runoff statistics and which is

²⁰ *The Economics of Watershed Protection*, T. Schueler (1999), Center for Watershed Protection, Endicott, MD. The article summarizes nationwide studies to support the statement that watershed planning and storm water management provides positive economic benefits.

²¹ *Storm Water Phase II Final Rule – Pre-Federal Register Version*, p 87 (U.S. EPA 1999). See U.S. EPA's discussion in response to challenges that the definition is sufficiently vague to be deemed adequate notice for purposes of compliance with the regulation.

²² *Urban Runoff Pollution – Summary Thoughts – The State of Practice Today and For the 21st Century*. Wat. Sci. Tech. 39(2) pp. 353-360. L.A. Roesner (1999)

²³ *Preliminary Data Summary of Urban Storm Water Best Management Practices* (1999), Report No. U.S. EPA-821-R-99-012, U.S. EPA. The document reviews municipal financing mechanisms and summarizes experience in the U.S. to date.

economically sound.²⁴ The maximized treatment volume is cut-off at the point of diminishing returns for rainfall/ runoff frequency. On the basis of this equation the maximized runoff volume for eighty-five percent treatment of annual runoff volumes in California can range from 0.08 to 0.86 inches depending on the imperviousness of the watershed area and the mean rainfall.²⁵

Other methods of establishing numerical BMP design standards include: (i) Percent treatment of the annual runoff; (ii) Full treatment of runoff from rainfall event equal to or less than a predetermined size; (iii) Percent reduction in runoff based on a rainfall event of standard size.²⁶ These numerical design standards have been applied to Development Planning in Puget Sound, WA; Alexandria, VA; Montgomery County, MD; Denver, CO; Orlando, FL; Portland, OR; and Austin, TX.

The City of Seattle requires that where new development coverage is 750 square feet or more, storm water detention be provided based on a 25 year storm return frequency, and a peak discharge rate not to exceed 0.2 cubic feet per second.²⁷ Additionally, for projects that add more than 9,000 square feet in developmental coverage, the peak drainage water discharge rate is limited to 0.15 cubic feet per second per acre for a two-year storm. The City of Denver requires new residential, commercial, and industrial developments to capture and treat the 80th percentile runoff event. This capture and proper treatment is estimated to remove 80 to 90 percent of the annual TSS load, which is a surrogate measure for heavy metal and petroleum hydrocarbon pollutants.²⁸

Some States have established numerical standards for sizing storm water post-construction BMPs for new development and significant redevelopment. The State of Maryland has established storm water numerical criteria for water quality of 0.9 to 1 inch, and BMP design standards in a unified approach combining water quality, stream erosion potential reduction, groundwater recharge, and flood control objectives.²⁹ The State of Florida has used numerical criteria to require treatment of storm water from new development since 1982, including BMPs sized for 80 percent reduction (95 percent for impaired waters) in annual TSS loads derived from the 90 percent (or greater for impaired waters) annual runoff treatment volume method for water quality.³⁰ The State of Washington has proposed at least six different approaches of establishing storm water numerical mitigation criteria for new development, which add 10,000 square feet of impervious surface or more for

²⁴ *In Urban Runoff Quality Management, WEF Manual of Practice No. 23, ASCE Manual and Report on Engineering Practice No. 87.* WEF, Alexandria, VA; ASCE, Reston, VA. 259 pp. (1998).

²⁵ *Sizing and Design Criteria for Storm Water Treatment Controls, Presentation to California Storm Water Quality Task Force*, November 13, 1998, Sacramento, CA. L.A. Roesner, Camp Dresser McKee.

²⁶ *Sizing and Design Criteria for Storm water Quality Infrastructure, Presentation at California Regional Water Quality Control Board Workshop on Standard Urban Storm Water Mitigation Plans*, August 10, 1999, Alhambra, CA., R.A. Brashear, Camp Dresser McKee.

²⁷ *City of Seattle Municipal Code, Chapter 22.802.015* – Storm water, drainage and erosion control requirements.

²⁸ *Urban Storm Drainage, Criteria Manual – Volume 3, Best Management Practices, Urban Drainage and Flood Control District, Denver, CO* (1999). Manual provides detail design criteria for new development for the Denver Metropolitan area.

²⁹ *Maryland Storm Water Design Manual* - (Maryland Department of the Environment 2000).

³⁰ *Florida Development Manual: A Guide to Sound Land and Water Management* (Florida Department of Environmental Protection 19xx). The manual describes structural and non-structural construction and post construction BMPs design criteria.

residential development, and 5,000 square feet of impervious surface or more for other types of development³¹. Other mitigation criteria options include the 90th percentile 24-hour rainfall event (used by the State of Maryland) and the six month 24 hour rainfall event (used by the State of Washington).

On a national level, the U.S. EPA is planning to standardize minimum BMP design and performance criteria for post-construction BMPs, and will likely build from the experience of effective state and local programs to establish national criteria.³² The U.S. EPA, based on the NURP, supports the first half-inch of rainfall as generating first flush runoff.³³ First flush runoff is associated with the highest pollutant concentrations, and not pollutant load. The U.S. EPA considers the first flush treatment method, the rainfall volume method, and the runoff capture volume method as common approaches for sizing of water quality BMPs.

Background

On 5 October 2000, the State Board adopted Order WQ 2000-11³⁴ concerning the use of Standard Urban Storm Water Mitigation Plans (SUSMPs) in municipal storm water permits for new developments and significant redevelopments by the private sector. The precedent setting decision largely sustained the Los Angeles Regional Board SUSMPs. The State Board amended the SUSMP to limit its application to discretionary projects as defined by CEQA, eliminated the category for projects in environmentally sensitive areas, and set aside the requirement for retail gasoline outlets to treat storm water until a threshold is developed in the future. In addition, the State Board articulated its support for regional solutions and the mitigation banking. The State Board recognized that the decision includes significant legal or policy determinations that are likely to recur (Gov. Code §11425.60). Due to the precedent setting nature of Order WQ 2000-11, the proposed permit must be consistent with applicable portions of the State Board's decision and include SUSMPs, which the proposed permit refers to as Development Standards. More detailed information is available at the Los Angeles Regional Water Quality Control

³¹ *Storm Water Management in Washington State Volumes 1 – 5*. Public Review Draft (Washington Department of Ecology 1999). The volumes 1,3 and 5 are most relevant to new development standards and cover Hydrologic and Flow Control Designs, Minimum Technical Requirements and Treatment BMPs. The volumes will be adopted as statewide standards in early 2000 after completion of public hearings according to the agency.

³² *Storm Water Phase II Final Rule* – 64 Fed. Reg. 68759. See U.S. EPA's discussion on construction and post-construction BMP requirements for Phase II.

³³ *A Watershed Approach to Urban Runoff: Handbook for Decisionmakers*, Terrene Institute and U.S. EPA Region 5 (1996). See discussion on sizing rules for water quality purposes, p 36.

³⁴ *State Water Board Order WQ 2000-11: SUSMP*; Memorandum from Chief Counsel to Regional Board Executive Officers, (December 26, 2000) discusses statewide policy implications of the decision.

Board's website:

www.swrcb.ca.gov/rwqcb4/html/programs/stormwater/la_ms4_final.html.

VI MONITORING PROGRAM

Regulations require the following: (1) quantitative data from representative outfalls designated by the permitting authority, which shall designate between five and ten outfalls or field screening points as representative of the commercial, residential, and industrial land use activities of the drainage area contributing to the MS4; (2) estimates of the annual pollutant load of the cumulative discharges to waters of the United States from all identified municipal outfalls and the event mean concentration of the cumulative discharges for constituents of concern; (3) estimated reductions in loadings of pollutants from discharges of municipal storm sewer constituents from municipal storm sewer systems expected as the result of SWMP implementation; and (4) the Discharger to submit an annual report that identifies, among other things, water quality improvements or degradation. Items 1-3 are required as Part 2 of the initial application. However, since they are needed to evaluate the SWMP, they are being incorporated into this Order.

Using data collected from a monitoring program, storm water management efforts can be prioritized, helping limited resources be most effective in improving receiving water quality. For example, a monitoring program can provide data that can allow for specific receiving waters and watersheds to be targeted for urban runoff management and education efforts based on their need. Particular pollutants and their sources can also be identified and targeted using monitoring data. In addition, monitoring data can be useful in assessing the effectiveness of an urban runoff management program. Successful efforts that have resulted in receiving water quality improvements can be analyzed for application elsewhere, while areas that need greater efforts can also be identified. In general, a comprehensive monitoring program can supply a wealth of data that can be used in a wide range of applications for improving water quality.

The City of Modesto's storm drainage system is unique since only one-third of the city area drains directly to receiving waters (positive storm drain system). The other two-thirds of the city area drains into rock wells. The positive storm drain system covers approximately 6,650 acres of the urban area with 33-percent draining to the Tuolumne River (0.9 percent of the Tuolumne River's total drainage area at that location), 54-percent to Dry Creek (4.3-percent of Dry Creek's total drainage area), and 13-percent to irrigation canals.

At a minimum, in order to meet the above referenced objectives, the Discharger shall conduct the following monitoring over the next five program years:

- (a) Urban Discharge Monitoring
- (b) Receiving Water Monitoring
- (c) Dry weather monitoring;
- (d) Detention basin monitoring.

- (e) Rock well and Groundwater monitoring
- (f) Water Column Toxicity Monitoring
- (g) Bio-assessment Monitoring
- (h) Tributary Monitoring

A. Urban Discharge Monitoring

Based on the land usage, the Discharger has identified the following two locations for the monitoring purpose:

- (i) Scenic Drive - receives runoff from the Sonoma neighborhood, an entirely residential neighborhood
- (ii) Bodem Street - receives runoff from the McHenry Avenue Corridor, a mixed residential/commercial land use

The Discharger monitored the same stations during the prior permit term. Using the same location will allow the Discharger to maintain consistency and compare the data obtained during the previous discharge monitoring studies. The Discharger shall monitor storm water discharges for every other year (three years) during the five-year term of the permit starting with the 2002/03 wet season. The proposed monitoring will allow Modesto to continue to characterize storm water discharges and track water quality constituent levels.

If additional sample station locations are needed, they shall be established under the direction of Board staff, and a description of the location shall be attached to this MRP. Sample collection and analysis shall follow standard EPA protocol. Samples shall be collected **twice during the wet season and once during the dry season.**

B. Receiving Water Monitoring

Receiving water monitoring shall be conducted on Dry Creek and the Tuolumne River during Year 2 through Year 5 of the permit term. The purpose of receiving water monitoring will be to develop baseline water quality data on the receiving water and to assess any impacts from Modesto urban runoff on the beneficial uses of the receiving water. Receiving water monitoring shall include water chemistry monitoring and bio-assessment monitoring

The receiving water chemistry monitoring will be performed in the Tuolumne River and Dry Creek, the two major water bodies, which receive Modesto urban runoff. Monitoring shall be conducted at two sites (upstream and downstream) for each receiving water location. If additional sample station locations are needed, they shall be established under the direction of Board staff, and a description of the location shall be attached to this MRP. Sample collection and analysis shall follow standard EPA protocol. Receiving water monitoring shall be conducted **during the two storm events and once during the dry season.**

At a minimum the discharger will monitor the constituents listed in **Table 1** as part of the discharge monitoring and the receiving water monitoring. However, additional constituents may be added to the list if new water quality issues develop over the course of this permit term.

C. Dry Weather Monitoring

The Discharger shall conduct dry weather urban run-off monitoring over approximately one-fifth of its drainage area each year for five years. After two years of dry weather monitoring the Discharger may evaluate the dry weather data and may propose to the Regional Board to discontinue the dry weather monitoring if sufficient justification exists.

In order to determine quality of discharge entering the rock wells, the Discharger shall conduct dry weather monitoring of rock wells. As per this monitoring, the Discharger shall collect at least 20 representative dry weather samples of flows entering the rock well system. Also, during the dry weather period, the Discharger shall conduct visual observation of rock well areas.

Dry weather sampling site for the positive storm drain system will be located at storm drain outfalls greater than 24 inches in diameter or at the nearest manhole upstream of the outfall. For the positive drain system, all these outfalls will be monitored once.

D. Detention Basin Monitoring

The Discharger shall develop a plan to perform influent and effluent monitoring, and sediment chemistry monitoring of two detention basins during Year 2 and 4 of the permit term. This monitoring will be designed to evaluate the effectiveness of the detention basin in removing pollutants.

E. Rock Well Monitoring

The rock wells pose a potential threat to the shallow groundwater. These Waste Discharge Requirements address these issues by requiring the Discharger to implement Rock Well monitoring and shallow groundwater monitoring as outlined in the attached Monitoring and Reporting Program (MRP).

The MRP describes monitoring which is required to evaluate the effectiveness of BMPs and the impact of the discharge on shallow groundwater. In addition, the Discharger proposes to coordinate their efforts with US Geological Survey (USGS) to conduct ground water monitoring. The USGS under the National Water Quality Assessment Program is in the process of developing a comprehensive plan for groundwater monitoring (including shallow groundwater) in the City of Modesto.

The proposed draft permit requires Discharger to develop a **Rock Well Assessment Plan**. The plan shall recommend a monitoring program for assessing the effectiveness of the rock wells in protecting groundwater. The assessment shall include at a minimum following:

- Representative rock wells for monitoring (minimum of two) based on land use, runoff characteristics, rock well installation, soil conditions, and potential for groundwater impact
- Sampling plan that includes runoff characterization, groundwater quality, and, if applicable, vadose zone and soil characterization. Sampling plan shall also include monitoring frequency and duration (minimum of two years) for adequately characterizing groundwater impacts from rock wells.
- Coordination with USGS ongoing National Water Quality Assessment Program and Modesto Irrigation District efforts to characterize sources of pollutants and track groundwater contamination. The Discharger shall coordinate with USGS to combine or complement monitoring efforts to optimize the rock well assessment
- Schedule for completing the assessment and preparing a final report. The final report shall include summary of monitoring data, analysis of groundwater impact, and recommendations regarding rock wells installation and maintenance for the protection of groundwater quality

F. Method Detection Limits

The Minimum Levels (MLs) listed in Appendix 4 of the State Board Policy for Implementation of Toxics Standards for Inland Surface Water, Enclosed bays, and Estuaries of California, 2000 (SIP) represent the lowest quantifiable concentration in a sample based on the proper application of all method-based analytical procedures and the absence of any matrix interferences.³⁵ These MLs must be incorporated into all water quality monitoring programs to detect priority toxic pollutants. The MLs are the only established criteria that take into consideration recent improvements in chemical analytical methods. If they are not used in the storm water program, concentrations of concern of priority toxic pollutants may not be detected. Detection and control of toxic pollutants in surface waters is necessary to achieve the CWA's goals and objectives.³⁶ Numeric criteria for toxic pollutants are necessary to evaluate the adequacy of existing and potential control measures to protect aquatic ecosystems and human health.³⁷ Also, using MLs will provide quantifiable data that is necessary to better assess water quality and to develop Waste Load Allocations and Load Allocations for TMDLs. Furthermore, non-detects cannot be used to accurately determine mass loadings. The criteria established in the CTR are legally applicable in the State of California for inland surface waters, enclosed bays and estuaries for all purposes and programs under the CWA.³⁸ Section 402(p)(3)(B)(iii) gives U.S. EPA and states the authority to incorporate appropriate water quality-based effluent limitations in NPDES permits for discharges from MS4s.³⁹

³⁵ SIP

³⁶ 65 Fed. Reg. 31683

³⁷ *Id.*

³⁸ 65 Fed. Reg. 31682

³⁹ 65 Fed. Reg. 31703

G. Total Suspended Solids (TSS) Monitoring

Every storm greater than .5 inch shall be sampled and analyzed for TSS. The purpose of this requirement is to consider the high variability of storm water discharges and determine more accurate average mass emission values. The high variability of storm water makes it unlikely to characterize a storm season based on a few mass emission samples. Studies show that the median event mean concentration for storm water programs that do not sample every storm is consistently biased low, relative to the annual flow-weighted mean⁴⁰. To adequately characterize a storm and capture central tendencies, many storms would need to be sampled. However, this is cost-prohibitive. Therefore, the correlation between TSS and trace metals should be used. Studies have indicated that runoff contaminants tend to be highly correlated with suspended solids in large rivers and creeks throughout southern California⁴¹. TSS measurements are one-tenth the cost of trace metal analyses. However, TSS concentrations accounted for up to 95% of the variability in some trace metal concentrations in a study of the Santa Ana River (urbanized watershed in Orange County) conducted by the Southern California Coastal Water Research Project (SCCWRP)².

H. Water Column Toxicity Monitoring

Toxicity testing is used to assess the impact of storm water pollutants on the overall quality of aquatic systems⁴². It can be a very useful tool for storm water managers. The Center for Watershed Protection rated toxicity testing as a "very useful" indicator for assessing municipal storm water programs. Toxicity testing can also be used to evaluate the effectiveness of storm water BMPs and other storm water pollution reduction measures⁴³. Managers can use the results of toxicity testing to identify areas of high concern and to establish priority locations for BMPs. Furthermore, Toxicity Identification Evaluations (TIEs) and Toxicity Reduction Evaluations (TREs) can be used to identify specific pollutants and their sources so that management actions can be more specifically prioritized.

Toxicity testing using multiple species is needed to provide a more complete assessment of the causes of toxicity in storm water⁴⁴. Reliance on single species tests may not provide an accurate assessment of toxicity⁴⁵. Because different species vary in their sensitivity to contaminants, tests with multiple species are needed to determine if other contaminants are present at toxic concentrations⁴⁶. Specifically, an

⁴⁰ Temporal variability patterns of stormwater concentrations in urban stormwater runoff. Leisl L. Tiefenthaler, Kenneth C. Schiff, and Molly Leecaster, Southern California Coastal Water Research Project (SCCWRP) annual Report 2000.

⁴¹ SCCWRP. 1992. Surface runoff to the Southern California Bight.

⁴² Center for Watershed Protection, Environmental Indicators to Assess Stormwater Control Programs and Practices (1996).

⁴³ Ibid.

⁴⁴ Bay, Jones, Schiff. Study of the Impact of Stormwater Discharge on Santa Monica Bay (1999).

⁴⁵ Center for Watershed Protection

⁴⁶ Bay, et al.

organism that is sensitive to pesticides, which have been found to be important factors in the toxicity of storm water from other watersheds, should be used⁴⁷. U.S. EPA recommends the use of the *Ceriodaphnia dubia* (water flea) reproduction and survival test for the measurement of receiving water toxicity. The water flea is one of the most sensitive aquatic species to diazinon, whereas the sea urchin fertilization test is insensitive to organophosphorus pesticides⁴⁸. By contrast, sea urchin sperm are approximately 10 times more sensitive to trace metals than are water fleas.

Furthermore, the toxicity component of the Monitoring Program should include toxicity identification procedures so that potential constituents of concern can be confirmed and others can be discounted. TIEs are needed to prioritize management actions.

Two wet weather and one dry weather samples will be analyzed for toxicity from each mass emission station every year. When a sample is substantially toxic to either test species, a Phase I TIE will begin immediately. Substantial toxicity means the amount of toxicity necessary to successfully conduct a Phase I TIE. For example, *Ceriodaphnia* TIEs require at least 50% mortality in undiluted sample at any time during the 7-day duration of the initial chronic bioassay.⁴⁹ If enough toxicity is not present at the beginning of a TIE, it cannot be successfully completed.

Based on the results from the Long Beach Monitoring Report, the Los Angeles Regional Board determined that using consecutive hits of toxicity in storm water as a trigger for a TIE does not yield adequate results. For example, every single storm event sampled at the Long Beach mass emission stations was toxic to some extent to at least one of the three species tested, but only one TIE was conducted on one species.⁵⁰ Also, due to the high variability of storm water, there is no guarantee that substantial toxicity will be present after the two consecutive hits. To increase the chances of a successful TIE and to better identify all causes of toxicity in storm water, TIEs should begin immediately when substantial toxicity is detected in a sample.

Furthermore, after a toxic pollutant or class of pollutants is identified as causing at least 50% of the toxic responses in at least 3 samples at a sampling location, Toxicity Reduction Evaluations (TRE) will be conducted. If a Phase I TIE only identifies a broad category of toxicants (i.e., nonpolar organics), additional TIE analysis, to the extent possible, will be conducted until the source of toxicity is identified.

Overall, the toxicity monitoring program will assess the impact of storm water on the overall quality of aquatic systems and implement measures to ensure that those impacts are eliminated or reduced. Chemical monitoring does not necessarily reveal

⁴⁷ Bay, et al.

⁴⁸ Kinnetic Laboratories, inc., City of Long Beach Storm Water Monitoring Report (2000-2001).

⁴⁹ SCCWRP

⁵⁰ City of Long Beach Storm Water Monitoring Report, 2000-2001. Kinnetic Labs, Inc. and SCCWRP

the impacts of storm water on aquatic life or beneficial uses of water bodies. Therefore, toxicity monitoring is a necessary component of a storm water monitoring program.

I. Bio-assessment

Bioassessment data can be an important indicator of stream health and storm water impacts. It can detect impacts that chemical and physical monitoring cannot. In the Interpretive Policy Memorandum on Reapplication Requirements for Municipal Separate Storm Sewer Systems, EPA encourages permitting authorities to consider requiring biological monitoring methods to fully characterize the nature and extent of storm water problems. Therefore, this Regional Board and other Regional Boards commonly require bioassessment monitoring in storm water and point source NPDES permits.

However, the fact that a biological index does not yet exist for this region is an issue that Regional Board staff took into consideration for this requirement. Without a biological index, including reference conditions and knowledge of background variability, data cannot be fully analyzed to accurately indicate stream health or impacts. However, it can be used to determine trends in the biological community, and it is necessary for index development. Also, bioassessment data can be analyzed in the future, after an index is developed.

J. Tributary Monitoring

The proposed draft permit requires Discharger to monitor Modesto Irrigation Canal (MID) # 3 to determine pollutant sources and prioritize management actions. The MRP document provided more information regarding this requirement.

VII. ADDITIONAL REQUIREMENTS

A. Peak Discharge Impact Study

The proposed permit requires that the Discharger determine numeric criteria to prevent or minimize erosion of natural stream channels and banks caused by urbanization. The purpose of the Peak Discharge Impact Study is to help meet that requirement. The Los Angeles and Ventura County MS4 permits contain a similar requirement.

B. BMP Effectiveness Study

The BMP Effectiveness Study is an integral part of the storm water monitoring program. It is necessary to document the effectiveness of treatment control BMPs so that the storm water management agency can make informed decisions on the use of BMPs.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2002-XXX

NPDES NO. CA0083526

WASTE DISCHARGE REQUIREMENTS
FOR
CITY OF MODESTO
STORM WATER DISCHARGE FROM
MUNICIPAL SEPARATE STORM SEWER SYSTEM
STANISLAUS COUNTY

The California Regional Water Quality Control Board, Central Valley Region (hereafter Regional Board) finds that:

1. The City of Modesto submitted a Report of Waste Discharge (ROWD) in December 1998 and requested reissuance of Waste Discharge Requirements (WDR) under the National Pollutant Discharge Elimination System (NPDES) area-wide municipal separate storm sewer system (MS4) permit to discharge storm water runoff from storm drains and watercourses within the jurisdiction of the Discharger and to implement a Storm Water Management Plan (hereafter SWMP) for the City of Modesto.
2. Prior to issuance of this Order, the City of Modesto was covered under the NPDES area-wide MS4 permit, Order No. 94-163 (NPDES No. CA0083526) adopted on 24 June 1994.
3. The City of Modesto is at the confluence of Dry Creek and the Tuolumne River. The existing drainage system with storm water runoff discharges to surface water covers approximately 6,650 acres, consisting of approximately 18 major outfalls. These outfalls discharge storm water either to Dry Creek, the Tuolumne River or Modesto Irrigation District (MID) Lateral Canal No. 3. MID Lateral No. 3 and Dry Creek are tributary to the San Joaquin River. **Attachment A** shows a map of the City of Modesto and the service area covered under this permit.
4. In about one-third of Modesto, the storm water runoff is discharged to surface waters. In the remaining two-thirds of the City, the storm water runoff is discharged to rock wells. Surface water discharges occur generally in the older areas of the City or those areas immediately adjacent to the Tuolumne River, Dry Creek or irrigation canals.
5. The City of Modesto (hereafter referred to as the Discharger) is defined as a medium municipality (population greater than 100,000 but less than 250,000) in the Code of Federal Regulations (CFR) (40 CFR 122.26 (b)(7)). As such, the Discharger must obtain an NPDES municipal storm water permit.
6. The Discharger has jurisdiction over and/or maintenance responsibility for the MS4 that it owns and/or operates in Stanislaus County. The discharge consists of the surface runoff generated

from various land uses in all the hydrologic sub-basins, which discharge into either storm sewers or rockwells.

7. This Order and its requirements are not intended to restrict or control local land use decision-making authority. The Discharger retains authority to make the final land-use decisions and retain full statutory authority for deciding what land uses are appropriate at specific locations within its jurisdiction. The Regional Board recognizes that the Discharger's land use authority allows urban developments that may generate pollutants and runoff that could impair receiving water quality and beneficial uses. The Discharger is therefore responsible for considering potential storm water impacts when making planning decisions in order to fulfill the Clean Water Act (CWA) requirement to reduce the discharge of pollutants in municipal storm water to the maximum extent practicable (MEP). This responsibility requires the Discharger to exercise its legal authority to ensure that any increased pollutant loads and flows do not affect the beneficial uses of the receiving water.
8. This Order is not intended to prohibit the inspection for or abatement of vectors by the State Department of Health Services or local vector agencies in accordance with Cal. Health and Safety Code § 2270 *et seq.* and §116110 *et seq.* Certain Treatment Control Best Management Practices (BMPs) if not properly designed, operated or maintained may create habitats for vectors (e.g. mosquito and rodents). This Order contemplates that the Discharger will closely cooperate and collaborate with local vector control agencies and the State Department of Health Services for the implementation, operation, and maintenance of Treatment Control BMPs in order to minimize the risk to public health from vector borne diseases .
9. There are portions of the City that are mainly agricultural, rural, and open space lands. It is not the intent of the federal storm water regulations to regulate storm water discharges from land uses of these types. Therefore, these areas are exempt from the requirements of this Order unless they discharge to the Discharger's conveyance system.
10. Development and urbanization increase pollutant load, volume, and discharge velocity. First, natural vegetated pervious ground cover is converted to impervious surfaces such as paved highways, streets, rooftops and parking lots. Natural vegetated soil can both absorb rainwater and remove pollutants providing an effective natural purification process. In contrast, pavement and concrete can neither absorb water nor remove pollutants, and thus the natural purification characteristics are lost. Second, urban development creates new pollution sources as the increased density of human population brings proportionately higher levels of vehicle emissions, vehicle maintenance wastes, municipal sewage waste, pesticides, household hazardous wastes, pet wastes, trash, and other anthropogenic pollutants.
11. The increased volume, increased velocity, and discharge duration of storm water runoff from developed areas has the potential to greatly accelerate downstream erosion and impair stream habitat in natural drainages. Studies have demonstrated a direct correlation between the degree of imperviousness of an area and the degradation of its receiving waters. Significant declines in the biological integrity and physical habitat of streams and other receiving waters have been found to occur with as little as 10 percent conversion from natural to impervious surfaces. Percentage impervious cover is a reliable indicator and predictor of potential water quality

degradation expected from new development. (*Impervious Cover as An Urban Stream Indicator and a Watershed Management Tool*, Schueler, T. and R. Claytor, In, *Effects of Water Development and Management on Aquatic Ecosystems* (1995), ASCE, New York; Leopold, L. B., (1973), *River Channel Change with Time: An Example*, Geological Society of America Bulletin, v. 84, p. 1845-1860; Hammer, T. R., (1972), *Stream Channel Enlargement Due to Urbanization: Water Resources Research*, v. 8, p. 1530-1540; Booth, D. B., (1991), *Urbanization and the Natural Drainage System--Impacts, Solutions and Prognoses: The Northwest Environmental Journal*, v. 7, p. 93-118; Klein, R. D., (1979), *Urbanization and Stream Quality Impairment: Water Resources Bulletin*, v. 15, p. 948-963; May, C. W., Horner, R. R., Karr, J. R., Mar, B. W., and Welch, E. B., (1997), *Effects of Urbanization on Small Streams in the Puget Sound Lowland Ecoregion: Watershed Protection Techniques*, v. 2, p. 483-494; Morisawa, M. and LaFlure, E. *Hydraulic Geometry, Stream Equilibrium and Urbanization* In Rhodes, D. P. and Williams, G. P. *Adjustments to the Fluvial System* p.333-350. (1979); Dubuque, Iowa, Kendall/Hunt. Tenth Annual Geomorphology Symposia Series; and *The Importance of Imperviousness: Watershed Protection Techniques*, 1(3), Schueler, T. (1994)).

Discharge Characteristics

12. The quality and quantity of these discharges vary considerably because of the effects of hydrology, geology, land use, season, and sequence and duration of hydrologic events. Urban storm water runoff may contain pollutants that may lower the quality of receiving waters and impact beneficial uses of the San Joaquin River and Delta. Studies indicate there may be increases in pollutant levels and aquatic toxicity in receiving waters as a result of urban storm water discharges.
13. Pollutants that may be contained in storm water include, but are not limited to, certain heavy metals; sediments; petroleum hydrocarbons from sources such as used motor oil; microbial pathogens; pesticides; sources of acute and chronic aquatic toxicity; and nutrients that cause or contribute to the depletion of dissolved oxygen and/or toxic conditions in the receiving water. Excessive flow rates of storm water may cause or contribute to downstream erosion and/or excessive sediment discharge and deposition in stream channels.
14. Water quality assessments conducted by the Discharger and the Regional Board identified impairment, or threatened impairment, of beneficial uses of water bodies in the Modesto Region. The causes of impairments include pollutants of concern identified in municipal storm water discharges by the City of Modesto in the ROWD. Pollutants in storm water can have damaging effects on both human health and aquatic ecosystems.
15. The discharge of washwaters and contaminated storm water from industries and businesses is an environmental threat and can also adversely impact public health and safety. The pollutants of concern in such washwaters include food waste, oil and grease, and toxic chemicals. Other storm water/industrial waste programs in California have reported similar observations. Illicit discharges from automotive service facilities and food service facilities have been identified elsewhere as a major cause of widespread contamination and water quality problems.

16. Certain pollutants present in storm water and/or urban runoff may be derived from extraneous sources that the Discharger has no or limited jurisdiction over. Examples of such pollutants and their respective sources are: PAHs which are products of internal combustion engine operation, nitrates, bis (2-ethylhexyl) phthalate and mercury from atmospheric deposition, lead from fuels, copper from brake pad wear, zinc from tire wear, dioxins as products of combustion, and natural-occurring minerals from local geology. However, the implementation of the measures set forth in this Order is intended to reduce the entry of these pollutants into storm water and their discharge to receiving waters.
17. The Discharger has conducted storm water monitoring since the 1992-93 rain season. During this period (1992 – 2000), the Discharger monitored urban runoff, dry weather runoff, rainfall, and receiving waters--Dry Creek, and the Tuolumne River. While monitoring of some constituents varied each year, the following constituents were monitored :
 - a. Conventional water quality parameters (total suspended solids, total dissolved solids, hardness, pH);
 - b. Oxygen demand (COD, BOD₅);
 - c. Nutrients (various forms of nitrogen and phosphorus);
 - d. Total recoverable and dissolved metals;
 - e. Organics (cyanide, volatiles, semi-volatiles, organochlorine pesticides, organophosphate pesticides, carbamate pesticides, total phenolics, halocarbons, aromatics, total petroleum hydrocarbons, oil and grease);
 - f. Bacteriological (fecal and total coliform, fecal streptococcus); and
 - g. Toxicity
18. During the previous permit term, the Discharger had identified oxygen-demanding substances, copper, lead, zinc, and total petroleum hydrocarbons (TPH) as constituents that were detected frequently or occurred at potentially significant concentrations, referred to as constituents of concern (COCs). During the term of that permit (1994 through 1999), the Discharger conducted storm water discharge and receiving water monitoring for each of these constituents to further characterize their occurrence and establish if any of the constituents have the potential to impact receiving waters. In addition, the U.S. Geological Survey (USGS) conducted an intensive water quality study in the Modesto area during early 1995. The Regional Board also conducted some receiving water toxicity testing.
19. Based on the monitoring conducted during the previous permit term, the Discharger has now identified diazinon and chlorpyrifos as COCs. The discharger has requested to downgrade former COCs (lead, copper, zinc, and TPH), to constituents of interest (COIs). The Regional Board has not agreed to the change in status of the constituents (lead, copper, zinc and TPH). As required by this order, the Discharger will monitor these constituents and provide additional information to support reclassifying them to COI. In addition the Discharger has identified boron, selenium, electroconductivity, and mercury as 303(d) listed constituents which they will monitor further to characterize their concentrations in storm water discharges or in receiving waters.

20. The Discharger has conducted monitoring of non-storm water flows and has determined that there is relatively little non-storm water flow in its storm drain system. As outlined in an 11 May 2001 document, the Discharger proposes to conduct dry weather monitoring during the term of this permit. Based on the monitoring it has conducted, the Discharger has requested that the non-storm water flow categories identified under the Non-Storm Water Discharges section of this Order be allowed.
21. The Discharger submitted a revised monitoring plan in May 2001 to the Regional Board outlining the monitoring proposed for the term of this permit. The Discharger's plan replaces the monitoring plan proposed in the original ROWD (submitted December 1998). The Discharger proposes to monitor dry weather and wet weather discharges, receiving waters, and detention basins to characterize dry and wet weather discharges, evaluate impacts on urban runoff discharges, and evaluate effectiveness of its BMPs and control measures. At a minimum, the plan will include monitoring of typical storm water discharge constituents. The Discharger will also further develop and implement a new program, their Pesticide Control Strategy.

Storm Water Discharge To Shallow Ground Water

22. The Discharger uses wells to dispose of stormwater in the two thirds of the city. These disposal wells are lined with rock to aid percolation. The wells are known as "rock wells".
23. The rock wells pose a potential threat to the shallow groundwater. These Waste Discharge Requirements address this threat by requiring the Discharger to implement Rock Well monitoring and shallow groundwater monitoring as outlined in the attached Monitoring and Reporting Program (MRP). The Discharger is addressing these concerns through the proposed monitoring program, new development program, public education and outreach program, and through the illicit discharges program element.
24. The MRP describes monitoring which is required to evaluate the effectiveness of BMPs and the impact of the discharge on shallow groundwater. In addition, the Discharger proposes to coordinate their efforts with US Geological Survey (USGS) to conduct ground water monitoring.
25. The USGS under the National Water Quality Assessment Program is in the process of developing a comprehensive plan for groundwater monitoring (including shallow groundwater) in the City of Modesto. USGS is planning to implement this groundwater monitoring program over the the next several years and during the term of this permit.
26. Storm water runoff contains wastes. These wastes may be in the form of suspended particles of soil or dissolved pollutants derived from fertilizers, pesticides or metals. Any person discharging waste or proposing to discharge waste that could affect the quality of the waters of the state must file a Report of Waste Discharge (California Water Code (CWC) § 13260). The Regional Board shall prescribe requirements that implement the Basin Plan, take into consideration the beneficial uses to be protected and the water quality reasonably required for that purpose (CWC § 13263).

27. The Discharger's rock wells are Class 5 injection wells under the U.S. EPA's Underground Injection Control program. The U.S. EPA does not provide regulation of these wells beyond registration.
28. Due to the discharge of storm water to shallow groundwater through rock wells and the large number of these wells operated by the City of Modesto, this discharge represents a threat to groundwater quality. It is the intent of these requirements to quantify the magnitude of this threat, determine if historic discharge to groundwater has impacted groundwater and to minimize the discharge of pollutants to groundwater.

Statutory and Regulatory Considerations

29. The CWA authorizes the U.S. EPA to permit a state to serve as the NPDES permitting authority in lieu of the U.S. EPA. The State of California has in-lieu authority for an NPDES program. The Porter-Cologne Water Quality Control Act authorizes the State Board, through the Regional Boards, to regulate and control the discharge of pollutants into waters of the State. The State Water Resource Control Board (State Board) entered into a Memorandum of Agreement with the U.S. EPA, on September 22, 1989, to administer the NPDES Program governing discharges to waters of the United States.
30. The Water Quality Act of 1987 added Section 402(p) to the CWA (33 U.S.C. § 1251-1387). This section requires the U.S. EPA to establish regulations setting forth NPDES requirements for storm water discharges in two phases:
 - a. The U.S. EPA Phase I storm water regulations were directed at MS4s serving a population of 100,000 or more, including interconnected systems and storm water discharges associated with industrial activities, including construction activities. The Phase I Final Rule was published on November 16, 1990 (55 *Fed. Reg.* 47990).
 - b. The U.S. EPA Phase II storm water regulations are directed at storm water discharges not covered in Phase I, including small MS4s (serving a population of less than 100,000), small construction projects (one to five acres), municipal facilities with delayed coverage under the Intermodal Surface Transportation Efficiency Act of 1991, and other discharges for which the U.S. EPA Administrator or the State determines that the storm water discharge contributes to a violation of a water quality standard, or is a significant contributor of pollutants to waters of the United States. The Phase II Final Rule was published on December 8, 1999 (64 *Fed. Reg.* 68722).
31. Section 402 (p) of the CWA (33 U.S.C. § 1342(p)) provides that MS4 permits must "require controls to reduce the discharge of pollutants to the MEP, including management practices, control techniques and system, design engineering method and such other provisions as the [U.S. EPA] Administrator or the State determines appropriate for the control of such pollutants." The State Board's Office of Chief Counsel (OCC) has issued a memorandum interpreting the meaning of MEP to include technical feasibility, cost, and benefit derived with the burden being on the municipality to demonstrate compliance with MEP by showing that a BMP is not

technically feasible in the locality or that BMPs costs would exceed any benefit to be derived (dated February 11, 1993).

32. This permit is intended to develop, achieve, and implement a timely, comprehensive, cost-effective storm water pollution control program to reduce the discharge of pollutants in storm water to the MEP from the permitted areas in the City of Modesto to the waters of the United States subject to the Discharger's jurisdiction.
33. Section 402(p)(3)(B)(ii) of the CWA requires NPDES permits to effectively prohibit non-storm water discharges into MS4s. Federal Regulations [40 CFR 122.26(d)(2)(iv)(B)(1)] require control programs to prevent illicit discharges to the MS4s. Certain categories of non-storm water discharges or flows are allowed to enter the MS4s provided that the Discharger has not identified such categories as significant sources of pollutants to waters of the United States.
34. The State Board has issued two statewide general NPDES permits for storm water discharges: one for storm water from industrial sites [NPDES No. CAS000001, General Industrial Activity Storm Water Permit (GIASP)] and the other for storm water from construction sites [NPDES No. CAS000002, General Construction Activity Storm Water Permit (GCASP)]. The GIASP was reissued on April 17, 1997. The GCASP was reissued on August 19, 1999. In addition, the Regional Board has issued General Permit Order No. 5-00-175 for dewatering and other low threat discharges, which authorizes such discharges to the MS4s owned and operated by The Discharger. The Discharger propose to conduct local regulatory compliance inspections at industries or construction sites which discharge to their MS4s and which are currently covered under the State NPDES General Permits. Under the CWA, the Discharger cannot enforce the State NPDES General Permits. However, the Discharger, through inspections of these facilities, can bring problems to the attention of Regional Board staff who can work cooperatively with the Discharger's to implement an effective storm water regulatory program.
35. Federal regulations at 40 CFR 122.26(d)(2)(iv)(A) and 40 CFR 122.26(d)(2)(iv)(C) require that MS4 Discharger's implement a program to monitor and control pollutants in discharges to the municipal system from industrial and commercial facilities that contribute a substantial pollutant load to the MS4. These regulations require that the Discharger establish priorities and procedures for inspection of industrial facilities and priority commercial establishments. This permit, consistent with the U.S. EPA policy, incorporates a cooperative partnership, including the specifications of minimum expectations, between the Regional Board and the Discharger for the inspection of industrial facilities and priority commercial establishments to control pollutants in storm water discharges (58 *Fed. Reg.* 61157).
36. When industrial or construction site discharges occur in violation of local permits and ordinances, the Regional Board refers first to the municipality where the discharge occurs for appropriate actions. If the municipality has demonstrated a good faith effort to educate and enforce but remains unsuccessful, the Regional Board may then step in to enforce the applicable statewide General Permit. If the municipality has not demonstrated a good faith enforcement effort, the Regional Board may initiate enforcement action against both the industrial or construction discharger (under the statewide General Permits), as well as against the authorizing municipal discharger for violations of this Order. The Discharger must also provide the first

level of enforcement against illegal discharges from other land uses it has authorized, such as commercial and residential developments.

37. It is the Regional Board's intent that this Order shall ensure compliance with water quality standards. This Order, therefore, includes requirements to the effect that discharges shall not cause or contribute to violations of water quality standards that would cause or create a condition of nuisance, pollution, or water quality impairment in receiving waters. Accordingly, the Regional Board is requiring that these requirements must be addressed through the effective implementation of BMPs to reduce pollutants in storm water.
38. Federal, State, regional or local entities within the Discharger's boundaries, not currently named in this Order, operate storm drain facilities and/or discharge storm water to the storm drains and watercourses covered by this Order. The Discharger may lack legal jurisdiction over these entities under the state and federal authorities. Consequently, the Regional Board recognizes that the Discharger should not be held responsible for such facilities and/or discharges. Caltrans is a state agency that is currently designated as one of these entities. On 15 July 1999, the State Regional Board issued a separate NPDES storm water permit to Caltrans, NPDES No. CAS000003 (Order No. 99-06-DWQ). The State Board may consider issuing separate NPDES storm water permits to other federal, state or regional entities operating within the Discharger's jurisdictional boundaries that may not be subject to direct regulation by the Discharger. Federal agencies are not subject to municipal storm water requirements although they may be permitted as industrial discharges.
39. California Water Code (CWC) § 13263(a) requires that waste discharge requirements issued by the Regional Board shall implement any relevant water quality control plans that have been adopted; shall take into consideration the beneficial uses to be protected and the water quality objectives reasonably required for that purpose; other waste discharges; the need to prevent nuisance; and provisions of Section (CWC) 13241. The Regional Board has considered the requirements of § 13263 and § 13241, and applicable plans, policies, rules, and regulations in developing these waste discharge requirements.
40. The Regional Board adopted a *Water Quality Control Plan, Fourth Edition, for the Sacramento and San Joaquin River Basins* (hereafter Basin Plan). The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies to achieve water quality objectives for all waters of the Basin. This Order implements the Basin Plan.
41. The beneficial uses of the Tuolumne River downstream of storm water discharges as identified in Table II-1 of the Basin Plan are municipal, domestic, and agricultural supply; water contact and non-contact recreation; aesthetic enjoyment; and preservation and enhancement of fish, wildlife and other aquatic resources.
42. The beneficial uses of the underlying ground water beneath the City of Modesto, as identified in the Basin Plan, are municipal and domestic water supply, industrial service, industrial process, and agricultural supply.

43. It is not feasible at this time to establish numeric effluent limits for pollutants in storm water discharges from MS4s. Therefore, the effluent limitations in this Order are narrative, and include the requirement to reduce pollutants in storm water discharges to the MEP. This Order requires the implementation of performance standards and BMPs (in lieu of numeric effluent limitations) identified in the Discharger's SWMP to control and abate the discharge of pollutants in storm water discharges. Implementation of performance standards and BMPs in accordance with the Discharger's SWMP and their schedules constitutes compliance with MEP requirements, and with requirements to achieve water quality objectives.
44. It is not feasible at this time to establish numeric effluent limits for pollutants in non-storm water discharges from facilities owned or operated by the Discharger. Therefore, the effluent limitations in this Order are narrative, and include the requirement to reduce pollutants in non-storm water discharges through implementation of Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technologies (BCT). Until such time that effluent limits are developed, implementation of both structural and non-structural BMPs constitutes compliance with the CWA Section 301 for BAT/BCT effluent limitation standards.
45. The U.S. EPA published an 'Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits' on August 26, 1996 (61 *Fed. Reg.* 43761). This policy discusses the appropriate kinds of water quality-based effluent limitations to be included in NPDES storm water permits to provide for the attainment of water quality standards.
46. On March 12, 2001, the U.S. Court of Appeals ruled that it is necessary to obtain a NPDES permit for application of aquatic pesticides to waterways. (*Headwaters, Inc. vs. Talent Irrigation District*, 243 F.3d. 526 (Ninth Cir., 2001)) This decision is controlling in California for nonagricultural applications of pesticides to waterways. The State Board adopted a general NPDES permit (Order No. 2001-12-DWQ) on July 19, 2001, for public entities that discharge pollutants to waters of the U.S. associated with the application of aquatic pesticides for resource or pest management. Public entities that conduct such activities must seek coverage under the general permit.
47. On 17 June 1999, the State Board adopted Order No. WQ 99-05, a precedent setting-decision, which identifies acceptable receiving water limitations language to be included in municipal storm water permits issued by the State and Regional Boards. The receiving water limitations included herein are consistent with the State Board Order, U.S. EPA policy, and the U.S. Court of Appeals decision in, *Defenders of Wildlife v. Browner* (Ninth Cir, 1999). The State Board OCC has determined that the federal court decision did not conflict with State Board Order No. WQ 99-05 (memorandum dated October 14, 1999).
48. Federal Regulations in 40 CFR 122.42(c)(7) require the Discharger to submit an annual report that identifies water quality improvements or degradation.
49. The action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of the California Environmental Quality Act (Public Resources Code Section 21000 et seq.) in accordance with Section 13389 of the California Water Code.

50. This Order serve as an NPDES permit pursuant to Section 402 of the CWA, and amendments thereto, and shall take effect upon the date of hearing, provided U.S. EPA has no objections.

Storm Water Management Plan

51. Federal regulations (40 CFR 122.26(d)(2)(iv)), require that the SWMP be implemented to reduce the discharge of pollutants to the MEP during the entire 5-year duration of the Permit. Within this permit period, the Discharger shall demonstrate compliance with the SWMP and this Order through the information and data supplied in annual Reports.
52. This Order requires evaluation of existing water quality impacts from urban storm water discharges, and the implementation and evaluation of the SWMP to reduce the discharge of pollutants into storm water runoff to the MEP and to improve water quality and protect beneficial uses. This Order requires implementation of the SWMP and its components to reduce pollutant loads from industrial and construction sites, new developments and existing urbanized areas. Additionally, this Order requires evaluation of the effectiveness of the SWMP in reducing the discharge of pollutants, improving water quality and protecting beneficial uses.
53. The Discharger submitted a SWMP dated December 1998 as part of its ROWD. The ROWD included a description of the proposed SWMP to be implemented by the Discharger to reduce the discharge of pollutants in storm water to the MEP and to effectively prohibit non-storm water discharges. It also describes the goals and objectives, legal authorities, source identification process, funding sources, fiscal analysis, assessment controls, BMP evaluation and improvement process, and monitoring plan of the management program.
54. The SWMP describes the framework for management of storm water discharges during the term of this permit. The SWMP describes the goals and objectives, legal authorities, source identification process, funding sources, fiscal analysis, assessment controls, BMPs evaluation and improvement process, and monitoring plan of the Discharger's storm water management program.
55. The SWMP outlined in the ROWD emphasizes pollution prevention through the following elements:
- (a) Program Management
 - (b) Legal Authority
 - (c) Construction Program
 - (d) Industrial and commercial Program
 - (e) Municipal Operations Program
 - (f) Public Education Program
 - (g) Illicit Discharge Program
 - (h) Performance and Effectiveness Evaluation
 - (i) Fiscal Analysis
 - (j) Monitoring Plan
 - (k) Development Standards

(l) Pesticides Control Strategy

The SWMP defines the scope of each element, identifies responsible City of Modesto staff and estimates costs for the five-year period from 2002 to 2006.

56. The goal of the Discharger's SWMP is to effectively eliminate illicit discharges and reduce pollutants in storm water to the MEP level. Criteria considered by the Discharger in selecting a program to reduce storm water pollutants to MEP include:
 - a. Mitigation of pollutants, which exceed water quality objectives, or known significant problem;
 - b. Technical feasibility and effectiveness;
 - c. Cost effectiveness;
 - d. Public priorities and public acceptance; and
 - e. Consistency with the national and state storm water program objectives, as those objectives continue to be modified.
57. This Order includes a Monitoring Program that incorporates Minimum Levels (MLs) established under the SIP. The SIP's MLs represent the lowest quantifiable concentration for priority toxic pollutants that is measurable with the use of proper method-based analytical procedures and factoring out matrix interference. The SIP's MLs therefore represent the best available science for determining MLs and are appropriate for a storm water monitoring program. The use of MLs allows the detection of toxic priority pollutants at concentrations of concern using recent advances in chemical analytical methods.
58. The SWMP contains performance standards and BMPs that the Discharger will perform to reduce the discharge of pollutants from its MS4. Performance standards represent the level of effort required of the Discharger in the implementation of BMPs and its SWMP. The specification of performance standards also simplifies the task of determining if the Discharger is putting forth a level of effort that will control pollutants in storm water discharges to the MEP.
59. Performance standards include implementation of recommended BMPs (source and treatment controls) for new development and redevelopment projects as required by local development standards and included in applicable standard specifications, design and procedures, and guidance documents (hereafter collectively referred to as Development Standards). The Discharger's Development Standards will be revised in accordance with the requirements of this Order.
60. The SWMP and modifications or revisions to the SWMP that are approved pursuant to this Order, are an integral and enforceable component of this Order.
61. This Order provides for an increase in storm water discharge due to continuing development within the Discharger's jurisdiction. Therefore, it is possible that future degradation of receiving water quality could occur. The continued implementation of the Discharger's SWMP that comply with the requirements of this Order will reduce the potential for discharges from MS4s to cause or contribute to the degradation of the receiving water quality. Therefore, this Order is

consistent with the anti-degradation provisions of 40 CFR 131.12 and the State Board Resolution 68-16.

Development Standards

62. On 5 October 2000 the State Board adopted Order WQ 2000-11, a precedent setting decision concerning the use of Standard Urban Storm Water Mitigation Plans, hereafter Development Standards, in municipal storm water permits for new developments and redevelopments by the private sector. The State Board recognized that the decision includes significant legal or policy determinations that are likely to recur. (Gov. Code § 11425.60.) The State Board's Order requires that the Regional Board's MS4 permits must be consistent with applicable portions of the State Board's decision and include Development Standards .
63. The State Board's Chief Counsel interprets Order WQ 2000-11 to encourage regional solutions and endorses a mitigation fund or "bank" that may be funded by developers who obtain waivers from the numerical design standards for new development and significant redevelopment.
64. Regulations 40 CFR 131.10(a) prohibits states from designating waste transport or waste assimilation as a use for any water of the United States. Authorizing the construction of a storm water/ urban runoff treatment facility in a jurisdictional water body would be tantamount to accepting waste assimilation as an appropriate use for that water body. Furthermore, the construction and operation of a pollution control facility in a water body can impact the physical, chemical, and biological integrity as well as the beneficial uses of the water body. Therefore, storm water treatment and/or mitigation in accordance with SUSMPs and any other requirements of this Order must occur prior to the discharge of storm water into a water of the U.S.
65. Studies indicate that facilities with paved surfaces subject to frequent motor vehicle traffic (such as parking lots and fast food restaurants), or facilities that perform vehicle repair, maintenance, or fueling (automotive service facilities) are potential sources of pollutants of concern in storm water [References: Pitt *et al.*, *Urban Storm Water Toxic Pollutants: Assessment, Sources, and Treatability*, Water Environment Res., 67, 260 (1995); *Results of Retail Gas Outlet and Commercial Parking Lot Storm Water Runoff Study*, Western States Petroleum Association and American Petroleum Institute, (1994); *Action Plan Demonstration Project, Demonstration of Gasoline Fueling Station Best Management Practices*, Final Report, County of Sacramento (1993); *Source Characterization*, R. Pitt, In *Innovative Urban Wet-Weather Flow Management Systems* (2000) Technomic Press, Field, R *et al.* editors; *Characteristics of Parking Lot Runoff Produced by Simulated Rainfall*, L.L. Tiefenthaler *et al.* Technical Report 343, Southern California Coastal Water Research Project (2001)].
66. Retail gasoline outlets (RGOs) are points of convergence for vehicular traffic and are similar to parking lots and urban roads. Studies indicate that storm water discharges from RGOs have high concentrations of hydrocarbons and heavy metals. (*Schueler and Shepp* (1992)). Pilot studies indicate that treatment control best management practices installed at retail gasoline stations are effective in removing pollutants, reasonable in capital cost, easy to operate, and do not present safety risks (*Rouge River National Wet Weather Demonstration Project, Task Product*

Memorandum – Evaluation of On-line Media Filters RPO-NPS-TPM59.00, Wayne County, MI, March 1999).

67. The Los Angeles and San Diego Regional Water Quality Control Boards have jointly prepared a Technical Report on the applicability of new development BMP design criteria for RGOs, [*Retail Gasoline Outlets: New Development Design Standards for Mitigation of Storm Water Impacts*, (June 2001)]. RGOs in Washington, Oregon, and other parts of the United States are already subject to numerical BMP design criteria under the MS4 program.
68. In March 1997, the California Storm Water Quality Task Force (SWQTF) published *Best Management Practice Guide – Retail Gasoline outlets*.
69. Order WQ 2000-11 directed the Los Angeles Regional Water Quality Control Board to mandate that RGOs employ the BMPs listed in SWQTF's March 1997 RGO BMP publication. Due to the threat to storm water quality from RGOs, Development Standards for RGOs are included in this Order.
70. The Discharger is responsible for adopting and enforcing local ordinances necessary to implement effective BMPs to prevent or reduce pollutants in storm water, and for providing funds for capital, operation, and maintenance expenditures necessary to implement such BMPs for the storm drain system that it owns and/or operates.

Impaired Water Bodies

71. Clean Water Act Section 303(d) and 40 CFR 130.7 addresses waters that have not attained the CWA national goal of "fishable, swimmable" by requiring states to identify these impaired water bodies and develop total maximum daily loads (TMDLs) for them, with oversight from the U.S. EPA. A TMDL is a quantitative assessment of water quality problems, contributing sources, and load reduction or control actions needed to restore and protect bodies of water. Once the Regional Board and U.S. EPA approve TMDLs, discharge of storm water into an impaired water body will be subject to load allocations and implementation plans established under the TMDLs. Certain early actions and/or assessments by the Discharger to address 303(d) listed water bodies and constituents are warranted and required by this Order.
72. On May 18, 2000, the U.S. EPA established numeric criteria for priority toxic pollutants for the State of California (California Toxics Rule (CTR)) 65 *Fed. Reg.* 31682 (40 CFR 131.38), for the protection of human health and aquatic life. These apply as ambient water quality criteria for inland surface waters, enclosed bays, and estuaries. The State Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP) – 2000*, on March 2, 2000, for implementation of the CTR (State Board Resolution No. 2000-15 as amended by Board Resolution No. 2000-030). This policy requires that discharges comply with TMDL-derived load allocations as soon as possible but no later than 20 years from the effective date of the policy.
73. Both the San Joaquin River and the Lower Tuolumne River are listed as impaired water bodies pursuant to Section 303(d) of the CWA. Also, downstream of the San Joaquin and the Lower

Tuolumne River, the Delta Waterways are listed as a water quality impaired water body. Regional Board staff are currently developing TMDLs for the San Joaquin River. The San Joaquin River is listed as impaired due to boron, chlorpyrifos, DDT, diazinon, electrical conductivity, Group A pesticides, selenium, and unknown toxicity. The Lower Tuolumne River is listed as impaired due to diazinon, Group A pesticides, and unknown toxicity. Once the Regional Board and U.S. EPA approve TMDLs, and if applicable, the Discharger's storm water NPDES permit may be modified to reflect the load allocation established by TMDLs.

Public Process

74. The Regional Board has notified the Discharger and interested parties of its intent to prescribe waste discharge requirements for this discharge. These parties have been given an opportunity to address the Regional Board at a public hearing and an opportunity to submit their written views and recommendations to the Regional Board.
75. The Regional Board has considered the information in the attached Information Sheet in developing the Findings of this Order. The attached Information Sheet is part of this Order.
76. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that Order No. 94-163 is rescinded, and that the Discharger, its agents, successors and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted there under, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. Discharge Prohibitions – Storm Water Discharges

1. Discharges from MS4s in a manner causing, or threatening to cause, a condition of pollution, contamination, or nuisance (as defined in California Water Code § 13050), in waters of the state are prohibited.
2. Discharges from MS4s that cause or contribute to exceedances of receiving water quality standards for surface water or groundwater are prohibited.
3. Discharges from the MS4s containing pollutants that have not been reduced to the MEP are prohibited.

B. Prohibition – Non-Storm Water Discharges

1. The Discharger shall, within its jurisdiction, effectively prohibit non-storm water discharges into its MS4 unless such discharges are either authorized by a separate NPDES permit; or not prohibited in accordance with this Order.

2. Pursuant to 40 CFR 122.26(d)(2)(iv)(B)(1), the following categories of non-storm water discharges need only be prohibited from entering an MS4 if such categories of discharges are identified by the Discharger as a significant source of pollutants to waters of the United States:
 - a. Diverted stream flows;
 - b. Rising ground waters;
 - c. Uncontaminated ground water infiltration [as defined at 40 CFR 35.2005(20)];
 - d. Uncontaminated pumped ground water;
 - e. Foundation drains;
 - f. Springs;
 - g. Water from crawl space pumps;
 - h. Footing drains;
 - i. Air conditioning condensation;
 - j. Flows from riparian habitats and wetlands;
 - k. Water line and hydrant flushing;
 - l. Landscape irrigation;
 - m. Planned and unplanned discharges from potable water sources;
 - n. Irrigation water;
 - o. Individual residential car washing;
 - p. Dechlorinated swimming pool discharges
 - q. Lawn watering; and
 - r. Street wash water.
3. When a discharge category above is identified as a significant source of pollutants to waters of the United States, the Discharger shall either:
 - a. Prohibit the discharge category from entering its MS4; or
 - b. Not prohibit the discharge category and implement, or require the responsible party (ies) to implement BMPs which will reduce pollutants to the MEP; and
 - c. If the Discharger elects not to prohibit the discharge category and implement, or require the responsible party(ies) to implement, BMPs which will reduce pollutants to the MEP, under B.3.b. above, the Discharger shall submit the following information to the Regional Board for approval of the Executive Officer within 90 days upon identification of such discharge category:
 - i. The non-storm water discharge category listed above which the Discharger elects not to prohibit; and
 - ii. The BMP(s) for each discharge category listed above which the Discharger will implement, or require the responsible party (ies) to implement, to prevent or reduce pollutants to the MEP.
4. Emergency fire fighting flows (i.e., flows necessary for the protection of life or property) do not require immediate implementation of BMPs and are not prohibited. However, the Discharger shall coordinate with other agencies and develop a response plan to ensure

minimal impacts of fire fighting flows to the environment. BMPs must be implemented to reduce pollutants from non-emergency fire fighting flows (i.e., flows from controlled or practice blazes) identified by the Discharger to be significant sources of pollutants to waters of the United States.

5. The Discharger shall examine all dry weather analytical monitoring results collected in accordance with the Monitoring Program of this Order to identify water quality problems that may be the result of any non-storm water discharge, including any non-prohibited discharge category (ies). Follow-up investigations shall be conducted as necessary to identify and control any non-prohibited discharge category (ies) listed above. Non-prohibited discharges listed above containing pollutants that cannot be reduced to the MEP by the implementation of BMPs shall be prohibited on a categorical or case-by-case.

C. Receiving Water Limitations

1. Receiving water limitations are site-specific interpretations of water quality standards from applicable water quality control plans. As such they are required as part of the permit. However, a receiving water condition not in conformance with these limitations is not necessarily a violation of this Order. The Regional Board may require an investigation to determine cause and culpability prior to asserting a violation has occurred. The discharge shall not cause the following in the receiving water:
 - a. Concentrations of dissolved oxygen to fall below 7.0 mg/l.
 - b. Oils, greases, waxes, or other materials to form a visible film or coating on the water surface or on the stream bottom.
 - c. Oils, greases, wax, floating material (liquids, solids, foams, and scums) or suspended material to create a nuisance or adversely affect beneficial uses.
 - d. Chlorine to be detected in the receiving water in concentrations equal or greater than 0.01 mg/l.
 - e. Aesthetically undesirable discoloration.
 - f. Fungi, slimes, or other objectionable growths.
 - g. The 30-day average for turbidity to increase as follows:
 - i More than 1 Nephelometric Turbidity Units (NTUs) where natural turbidity is between 0 and 5 NTUs.
 - ii More than 20 percent where natural turbidity is between 5 and 50 NTUs.
 - iii More than 10 NTUs where natural turbidity is between 50 and 100 NTUs.
 - iv More than 10 percent where natural turbidity is greater than 100 NTUs.

- h. The normal ambient pH to fall below 6.5, exceed 8.5, or change by more than 0.5 units.
 - i. Deposition of material that causes nuisance or adversely affects beneficial uses.
 - j. Taste or odor-producing substances to impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin or to cause nuisance or adversely affect beneficial uses.
 - k. Radionuclides to be present in concentrations that exceed maximum contaminant levels specified in the California Code of Regulations, Title 22; that harm human, plant, animal or aquatic life; or that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.
 - l. Aquatic communities and populations, including vertebrate, invertebrate, and plant species, to be degraded.
 - m. Toxic pollutants to be present in the water column, sediments, or biota in concentrations that adversely affect beneficial uses; that produce detrimental responses in human, plant, animal, or aquatic life; or that bioaccumulate in aquatic resources at levels which are harmful to human health.
 - n. Violation of any applicable water quality standard for receiving waters adopted by the Regional Board or the State Board pursuant to the CWA and regulations adopted there under.
2. The discharge shall not cause or contribute to a violation of any applicable water quality standard for receiving waters contained in the Basin Plan. If different applicable water quality standards are adopted after the date of adoption of this Order, the Regional Board may revise and modify this Order as appropriate.

D. Provisions

- 1. The Discharger shall comply with this Order through the timely implementation of control measures and other actions to reduce pollutants in the discharge in accordance with the SWMP and other requirements of this Order including any modifications or amendments developed pursuant to this Order. The SWMP shall be designed to achieve compliance with this Order. If exceedance(s) of water quality objectives persist, notwithstanding implementation of the SWMP, the Discharger shall assure compliance with Discharge Prohibitions and the Receiving Water Limitations by complying with the following procedure:
 - a. Upon determination by either the Discharger or the Regional Board that storm water discharges have caused or are causing an exceedance of an applicable water quality objective, the Discharger shall promptly notify the Regional Board. Following notification, the Discharger shall submit a Report of Water Quality Exceedance

(RWQE) to the Regional Board that describes BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that have caused or are causing the exceedance of applicable water quality objectives. The RWQE may be incorporated in the Annual Report revision to the SWMP unless the Regional Board directs an earlier submittal. The RWQE shall include an implementation schedule. The Regional Board may require modifications to the RWQE.

- i The Discharger shall submit any modifications to the report required by the Regional Board within thirty (30) days of notification.
 - ii Within forty-five (45) days following report approval by the Regional Board, the Discharger shall revise that SWMP and monitoring program to incorporate the approved modified control measures that have been and will be implemented, the implementation schedule, and any additional monitoring required.
 - b. The Discharger shall implement the revised SWMP and monitoring program in accordance with the approved schedule
2. As long as the Discharger has complied with the procedures set forth in Provision D.1 and is implementing the revised SWMP, it does not have to repeat the same procedure for continuing or recurring exceedances of the same receiving WQS unless directed by the Regional Board to do so.
3. Within its geographic jurisdiction, the Discharger shall:
 - a. Comply with the requirements of this Order, the SWMP, and any modifications to the SWMP;
 - b. Coordinate among its internal departments and agencies, as appropriate, to facilitate the implementation of the requirements of the SWMP applicable to such Permittee in an efficient and cost-effective manner;
 - c. Participate in intra-agency coordination (e.g. Fire Department, Building and Safety, Code Enforcement, Public Health, etc.) necessary to successfully implement the provisions of this Order and the SWMP.
 - d. Prepare an annual Budget Summary of expenditures applied to the storm water management program. This summary shall identify the storm water budget for the following year, using estimated percentages and written explanations where necessary, for the specific categories noted below:
 - i Program Management
 - a) Administrative Costs
 - ii Program Implementation – Where information is available, provide an estimated percent breakdown of expenditure for the following categories:

- a) Illicit Connection/illicit discharge
 - b) Development planning
 - c) Development construction
 - d) Construction inspection activities
 - e) Industrial/Commercial inspection activities
 - f) Public Agency Activities
 - g) Maintenance of Structural BMPs and Treatment Control BMPs
 - h) Municipal Street sweeping
 - i) Catch basin cleanup
 - j) Trash collection
 - k) Capital costs
- iii Public Information and Public Participation;
 - iv Monitoring program
 - v Miscellaneous Expenditures
 - vi In addition to the Budget Summary, the Discharger shall report any supplemental dedicated budgets for the same categories.

Storm Water Management Plan

4. Upon adoption of this Order, the discharger shall modify, and finalize its SWMP to address the requirements of this Order and submit the SWMP by **1 September 2002** for public review, comment and Regional Board's approval. The Discharger shall address these comments and modify, if necessary, the SWMP for submittal to the Regional Board for final approval. The SWMP shall include a description of new or revised BMPs that address the requirements of this Order. The SWMP shall also include performance standards or other assessment tools for verifying that the BMP has been achieved. The discharger shall incorporate newly developed or updated BMPs and assessment tools/Performance Standards acceptable to the Executive Officer, into revisions to the SWMP and adhere to implementation of the new/revised BMPs. The approved SWMP shall serve as the framework for identification, assignment, and implementation of BMPs. The Discharger shall develop and implement a SWMP that contains the following elements:
 - a. Program Management
 - b. Legal Authority
 - c. Additional elements
 - i Construction Program
 - ii Industrial and Commercial Program
 - iii Municipal Operations
 - iv Illicit Discharge Program
 - v Public Education Outreach Program
 - vi Performance and Effectiveness Evaluation
 - vii Fiscal Analysis
 - viii Monitoring Plan
 - d. Development Standards

e. Water Quality Based Programs

The Plan shall include a section that identifies all departments within the jurisdiction that conduct urban runoff related activities, and their roles and responsibilities under this Order. The annual report shall include an up-to-date organizational chart specifying these departments and key personnel responsible for issuance of enforcement actions.

Program Management

5. **Program Management:** Program management involves ensuring that all elements of the SWMP are implemented on schedule and all requirements of this order are complied with.
- a. **Work Plan:** The Discharger shall submit a Work Plan by **1 April** of each year. The Work Plan Report shall provide the SWMP's and the Discharger's activities for the upcoming year beginning 1 July of that year and ending 30 June the following year.
 - b. **Annual Report:** The Discharger shall submit an Annual Report by **1 September** of each year. The Annual Report shall document the status of the SWMP's and the activities during the previous fiscal year, including the results of a qualitative and quantitative field level assessment of activities implemented by the Discharger, and the performance of tasks contained in the SWMP. The Annual Report shall include a compilation of deliverables and milestones completed during the previous 12-month period, as described in the SWMP and Work Plan. In each Annual Report, the Discharger may propose pertinent updates, improvements, or revisions to the SWMP, which shall be complied with under this Order unless disapproved by the Executive Officer or acted upon in accordance with this Order.
 - c. **SWMP Implementation:** The Discharger shall have commenced full implementation of all requirements of the SWMP Section of this Order by **1 September 2003**, with the exception of the requirements included in New Development or Significant Redevelopment Standards provisions of this Order. The SWMP is an enforceable part of this Order.
 - d. **SWMP Modification:** The Discharger's SWMP may need to be modified, revised, or amended from time to time to respond to a change in conditions and to incorporate more effective approaches to pollutant control. Provisions of this Order require review and revision of the certain components of the Discharger's SWMP. Proposed SWMP revisions will be part of the annual review process and incorporated in the Annual Report. In addition, the Discharger shall revise its SWMP to comply with regional or watershed specific requirements, and/or waste load allocations developed and approved pursuant to the process for the degradation and implementation of TMDLs for impaired water bodies. Changes shall be brought before the Regional Board as permit amendments.

Legal Authority

6. **Legal Authority:** Discharger shall establish, maintain, and enforce adequate legal authority to control pollutant discharges from its MS4 through ordinance, statute, permit, contract or similar means. This legal authority must, at a minimum, authorize the discharger to:
- a. Control the contribution of pollutants in discharges of runoff associated with industrial and construction activity to its MS4. This requirement applies both to industrial and construction sites, which have coverage under the statewide general industrial or construction storm water permits, as well as to those sites that do not require permit coverage. .
 - b. Prohibit all identified illicit discharges not otherwise allowed pursuant to Section B.2 from which pollutants have not been removed to the MEP including the following:
 - i Sewage overflows;
 - ii Discharges of wash water resulting from the hosing or cleaning of gas stations, vehicle repair services, or other types of automotive service facilities;
 - iii Discharges resulting from storage, cleaning, repair, or maintenance of any type of equipment, machinery, or facility including motor vehicles, cement-related equipment, and port-a-potty servicing, etc.;
 - iv Discharges of wash water from mobile operations such as mobile vehicle washing, steam cleaning, power washing, and carpet cleaning, etc.;
 - v Discharges of wash water from the cleaning or hosing of impervious surfaces in municipal, industrial, and commercial, and residential areas including parking lots, streets, sidewalks, driveways, patios, plazas, work yards and outdoor eating or drinking areas, etc.;
 - vi Discharges of runoff from material storage areas containing equipment, chemicals, fuels, grease, oil, or other hazardous materials;
 - vii Discharges of pool or fountain water containing chlorine, biocides, or other chemicals; discharges of pool or fountain filter backwash water;
 - viii Discharges of sediment, pet waste, vegetation clippings, or other landscape or construction-related wastes;
 - ix Discharges of food-related wastes (e.g., grease, fish processing, and restaurant kitchen mat and trash bin wash water, etc.);
 - x Discharge of runoff from the washing of toxic materials from paved or unpaved areas; and
 - xi Discharge of material such as litter, landscape debris, construction debris, or any state or federally banned pesticides.
 - c. Prohibit and eliminate illicit connections to the MS4;
 - d. Control the discharge of spills, dumping, or disposal of materials other than storm water to its MS4;

- e. Use enforcement mechanisms to require compliance with storm water ordinances, permits, contracts, or orders;
 - f. Control the contribution of pollutants from one portion of the MS4 to another portion of the MS4 through interagency agreements among the Discharger and other public entities discharging to the MS4 such as Caltrans;
 - g. Carry out all inspections, surveillance, and monitoring necessary to determine compliance and noncompliance with local ordinances and permits and with this Order, including the prohibition of illicit discharges to the MS4;
 - h. Require the use of BMPs to prevent or reduce the discharge of pollutants to MS4 to MEP; and
 - i. Require that Treatment Control BMPs be properly operated and maintained to prevent the breeding of vectors.
7. The Discharger shall amend and adopt, no later than **1 April 2003** (if necessary), a specific storm water and urban runoff ordinance to enforce all requirements of this Order.
8. The Discharger shall provide to the Regional Board a statement certified by its chief legal counsel that the discharger has adequate legal authority to implement and enforce each of the requirements contained in 40 CFR 122.26(d)(2)(i)(A-F) and this Order. This statement shall be included in the annual report that describes the following:
- a. Citation of urban-runoff-related ordinances and the reasons they are enforceable;
 - b. Identification of the local administrative and legal procedures available to mandate compliance with urban runoff related ordinances and therefore with the conditions of this Order;
 - c. Identification of all departments within the jurisdiction that conduct storm water pollution prevention related activities and their roles and responsibilities under this Order. The annual progress report shall include an up-to-date organizational chart specifying these departments and key personnel responsible for issuance of enforcement actions;
 - d. Description of how these ordinances are implemented and appealed; and
 - e. Description of whether the municipality can issue administrative orders and injunctions or if it must go through the court system for enforcement actions.

Additional Elements

9. Construction Program

- a. The Discharger shall update and continue to implement the Construction Component of its SWMP to reduce pollutants in runoff from construction sites during all construction phases. At a minimum the Construction Program shall address:
 - i Pollution Prevention
 - ii Grading Ordinance Modification
 - iii Construction and Grading Approval Process
 - iv Source Identification
 - v Threat to Water Quality Prioritization
 - vi BMP Implementation
 - vii Construction Site Inspections
 - viii Enforcement Measures for Construction Sites
 - ix Reporting of Non-compliant Sites
 - x Education Focused on Construction Activities
- b. The Discharger shall implement a program to control runoff from construction activity at all construction sites within its jurisdiction. The program shall ensure the following minimum requirements are effectively implemented at all construction sites:
 - i Sediments generated on the project site shall be retained using adequate Treatment Control or Structural BMPs;
 - ii Construction-related materials, wastes, spills, or residues shall be retained at the project site to avoid discharge to streets, drainage facilities, receiving waters, or adjacent properties by wind or runoff;
 - iii Non-storm water runoff from equipment and vehicle washing and any other activity shall be contained at the project site; and
 - iv Erosion from slopes and channels shall be controlled by implementing an effective combination of BMPs such as limiting grading during the wet season; inspecting graded areas during rain events; planting and maintenance of vegetation on slopes; and covering erosion susceptible slopes.
- c. For construction sites covered under the General Construction Permit, the Discharger shall comply with all conditions in Provision 9.b above and shall:
 - i Require the preparation and submittal of a local Storm Water Pollution Prevention Plan (SWPPP) for approval prior to issuance of a grading permit for construction projects.

- ii Inspect all construction sites for storm water quality requirements **a minimum of bi-weekly during wet weather period** (1 October to 30 April) and **monthly thereafter**.
- iii Require, no later than 10 March 2003, prior to issuing a grading permit for all projects less than five acres requiring coverage under a statewide general construction storm water permit, proof of a Waste Discharger Identification (WDID) Number for filing a Notice of Intent (NOI) for permit coverage and a certification that a SWPPP has been prepared by the project developer.

d. General Permit Violation Referrals

- i Violations of the SWMP and City Ordinances
The Discharger may refer a violation(s) to the Regional Board provided that the Discharger has made a good faith effort of progressive enforcement. At a minimum, the Discharger's good faith effort must include documentation of:
 - a) Two follow-up inspections, and
 - b) Two warning letters or notices of violation.
- ii Violations of the General Permit Filing Requirements –
For those projects subject to the General Permit, the Dischargers shall refer non-filers (i.e., those projects which cannot demonstrate that they have a WDID number) to the Regional Board, within seven days of making a determination. In making such referrals, the Dischargers shall include, at a minimum, the following documentation:
 - a) Project location;
 - b) Developer;
 - c) Estimated project size; and
 - d) Records of communication with the developer regarding filing requirements.

- e. The Discharger shall train employees in targeted positions (whose jobs or activities are engaged in construction activities including construction inspection staff) regarding the requirements of the storm water management program no later than **1 September 2002**, and annually thereafter

10. **Industrial/Commercial Program:** The Discharger shall require implementation of pollutant reduction and control measures at industrial and commercial facilities, with the objective of reducing pollutants in storm water runoff to the MEP. Except as specified in other sections of this Order, pollutant reduction and control measures can be used alone or in combination, and can include Structural and Source Control BMPs, and operation and maintenance procedures, which can be applied before, during, and/or after pollution generating activities. At a minimum, the Industrial/Commercial Program shall include requirements to: (1) track, (2) inspect, and (3) ensure compliance at industrial and

commercial facilities that are sources of pollutants in storm water.

a. Track Pollutant Sources

- i The Discharger shall maintain an inventory or database of all facilities within its jurisdiction that are sources of storm water pollution. Sources to be tracked are summarized below:
 - a) Commercial Facilities
 - i) Restaurants;
 - ii) RGOs and automotive dealerships; and
 - iii) Automotive service facilities.
 - b) Facilities covered under Industrial General Permit.
 - c) Other Federally-mandated Facilities [as specified in 40 CFR 122.26(d)(2)(iv)(C)]
 - i) Municipal landfills;
 - ii) Hazardous waste treatment, storage and disposal (TSDF) facilities; and
 - iii) Facilities subject to SARA Title III (also known as EPCRA).
- ii The Discharger shall include the following minimum fields of information for each industrial and commercial facility:
 - a) Name and address of facility owner/operator;
 - b) Coverage under the General Industrial Storm Water Permit or other individual or general NPDES permits; and
 - c) Narrative description including SIC codes that best reflects the industrial activities at and principal products of each facility.
- iii The Discharger may add other fields of information, such as material usage and/or industrial output, and discrepancies between SIC Code designations (as reported by facility operators) and the actual type of industrial activity has the potential to pollute storm water. In addition, the Dischargers may use an automated database system, such as a GIS or Internet-based system.
- iv The Discharger shall update its inventory of pollutant sources at least annually. The update may be accomplished through collection of new information obtained through field activities or through other readily available intra-agency informational databases (e.g. business licenses, pretreatment permits, sanitary sewer hook-up permits, etc.).

b. Inspect Pollutant Sources

The Discharger shall inspect all facilities in the categories and at a level and

frequency as specified below.

i Commercial Facilities

a) Restaurants

Frequency of Inspections: Twice during the 5-year term of the Order, provided that the first inspection occurs no later than **1 April 2004**, and that there is a minimum interval of one year in between the first compliance inspection and the second compliance inspection.

Level of inspections: The Discharger, in cooperation with its appropriate department (such as health or public works), shall inspect all restaurants within its jurisdiction to confirm that storm water BMPs are being effectively implemented in compliance with City ordinances, State law, the SWMP, and this Order. At each restaurant, inspectors shall verify that the restaurant operator:

- i) has received educational materials on storm water pollution prevention practices;
- ii) Does not pour oil and grease or oil and grease residue onto a parking lot, street or adjacent catch basin;
- iii) keeps the trash bin area clean and trash bin lids closed, and does not fill trash bins with washwater or any other liquid;
- iv) does not allow illicit discharges, such as discharge of washwater from floor mats, floors, porches, parking lots, alleys, sidewalks, and streets (in the immediate vicinity of the establishment), filters, or garbage/trash containers; and
- v) removes food waste, rubbish, or other materials from parking lots in a sanitary manner that does not create a nuisance or discharge to the storm drain.

b) Retail Gasoline Outlets and Automotive Dealerships

Frequency of Inspection: Twice during the 5-year term of the Order, provided that the first inspection occurs no later than **1 April 2004**, and that there is a minimum interval of one year in between the first compliance inspection and the second compliance inspection.

Level of Inspection: The Discharger shall confirm that BMPs are being effectively implemented at each RGO and automotive dealership within its jurisdiction, in compliance with the SWMP and the SQTf Best Management Practice Guide for RGOs. At each RGO and automotive dealership, inspectors shall verify that each operator:

- i) routinely sweeps fuel-dispensing areas for removal of litter and debris, and keeps rags and absorbents ready for use in case of leaks and spills;
- ii) is aware that washdown of facility area to the storm drain is prohibited;
- iii) is aware of design flaws (such as grading that doesn't prevent run-on, or inadequate roof covers and berms), and that equivalent BMPs are implemented;
- iv) inspects and cleans storm drain inlets and catch basins within each facility's boundaries no later than October 1st of each year;
- v) posts signs close to fuel dispensers, which warn vehicle owners/operators against "topping off" of vehicle fuel tanks and installation of automatic shutoff fuel dispensing nozzles;
- vi) routinely checks outdoor waste receptacle and air/water supply areas, cleans leaks and drips, and ensures that only watertight waste receptacles are used and that lids are closed; and
- vii) trains employees to properly manage hazardous materials and wastes as well as to implement other storm water pollution prevention practices.

c) **Automotive Service Facilities**

Frequency of Inspections: Twice during the 5-year term of the Order, provided that the first inspection occurs no later than **1 April 2004**, and that there is a minimum interval of one year in between the first compliance inspection and the second compliance inspection.

Level of inspections: The Discharger shall inspect all automotive service facilities within its jurisdiction to confirm that storm water BMPs are effectively implemented in compliance with City ordinances, the SWMP, and this Order. At each automotive service facility, inspectors shall verify that each operator:

- i) maintains the facility area so that it is clean and dry and without evidence of excessive staining;
- ii) implements housekeeping BMPs to prevent spills and leaks;
- iii) properly discharges wastewaters to a sanitary sewer and/or contains wastewaters for transfer to a legal point of disposal;
- iv) is aware of the prohibition on discharge of non-storm water to the storm drain;
- v) properly manages raw and waste materials including proper disposal of hazardous waste;
- vi) protects outdoor work and storage areas to prevent contact of pollutants with rainfall and runoff;
- vii) labels, inspects, and routinely cleans storm drain inlets that are located on the facility's property; and
- viii) trains employees to implement storm water pollution prevention practices.

ii **Facilities Covered under Industrial General Permit**

Dischargers need not inspect facilities that have been inspected by the Regional Board within the past six months. For the remaining Phase I facilities that the Regional Board has not inspected, The Discharger shall conduct compliance inspections as specified below.

a) **Frequency of Inspection**

Annually during the 5-year term of the Order, provided that the first inspection occurs no later than **1 April 2003**.

b) **Level of Inspection:**

The Discharger shall confirm that each operator:

- i) has a current Waste Discharge Identification (WDID) number for facilities discharging storm water associated with industrial activity, and that a Storm Water Pollution Prevention Plan is available on-site, and
- ii) is effectively implementing BMPs in compliance with City ordinances, the SWMP, and this Order.

iii **Other Federally-mandated Facilities**

- a) **Frequency of Inspection:** Twice during the 5-year term of the Order, provided that the first inspection occurs no later than **1 April 2004**, and that there is a minimum interval of one year in between the first compliance inspection and the second compliance inspection.

b) **Level of Inspection:** The Discharger shall confirm that each operator:

- i) has a current Waste Discharge Identification (WDID) number for facilities discharging storm water associated with industrial activity, and that a Storm Water Pollution Prevention Plan is available on-site, and
- ii) is effectively implementing BMPs in compliance with City ordinances, the SWMP, and this Order.

c. **Ensure Compliance of Pollutant Sources**

- i **BMP Implementation:** In the event that the Discharger determines that a BMP specified by the SWMP is infeasible at any site, the Discharger shall require implementation of other BMPs that will achieve the equivalent reduction of pollutants in the storm water discharges. In addition, for those BMPs that are not adequate to achieve water quality objectives, the Dischargers may require additional site-specific controls, such as Treatment Control BMPs.

- ii **Progressive Enforcement:** The Discharger shall implement a progressive enforcement policy to ensure that facilities are brought into compliance with all storm water requirements within a reasonable period as specified below.
 - a) In the event that the Discharger determines, based on an inspection conducted above, that an operator has failed to adequately implement all necessary BMPs, the Discharger shall take progressive enforcement action, which, at a minimum, shall include a follow-up inspection within a four weeks from the date of the initial inspection.
 - b) In the event that the Discharger determines that an operator has failed to adequately implement BMPs after a follow-up inspection, the Discharger shall take further enforcement action as established through authority in its municipal code and ordinances or through the judicial system.
 - c) The Discharger shall maintain records, including inspection reports, warning letters, notices of violations, and other enforcement records, demonstrating a good faith effort to bring facilities into compliance.

iii Interagency Coordination

- a) **Referral of Violations of this Order, the SWMP, and City Storm Water Ordinances:** The Discharger may refer a violation(s) to the Regional Board provided that that Discharger has made a good faith effort of progressive enforcement. At a minimum, the Discharger's good faith effort must include documentation of:
 - i) Two follow-up inspections, and
 - ii) Two warning letters or notices of violation.
- b) **Referral of Violations of the General Industrial Activity Storm Water Permit, including Requirements to File a Notice of Intent:** For those facilities in violation of the General Permit, the Discharger may escalate referral of such violations to the Regional Board after one inspection and one written notice to the operator regarding the violation. In making such referrals, the Dischargers shall include, at a minimum, the following documentation:
 - i) Name of the facility;
 - ii) Operator of the facility;
 - iii) Owner of the facility;
 - iv) Industrial activity being conducted at the facility that is subject to the General Permit; and
 - v) Records of communication with the facility operator regarding the violation, which shall include at least an inspection report and one written notice of the violation.

The Discharger shall, at a minimum, make such referrals on a quarterly basis.

- c) **Investigation of Complaints Regarding Facilities – Transmitted by the Regional Board Staff:** The Discharger shall initiate, within one business day, investigation of complaints (other than non-storm water discharges) regarding facilities within its jurisdiction. The initial investigation shall include, at a minimum, a limited inspection of the facility to confirm the complaint to determine if the facility is effectively complying with this Order, the SWMP and City storm water/urban runoff ordinances, and to oversee corrective action.
- d) **Support of Regional Board Enforcement Actions:** As directed by the Regional Board Executive Officer, the Dischargers shall support Regional Board enforcement actions by: assisting in identification of current owners, operators, and lessees of facilities; providing staff, when available, for joint inspections with Regional Board inspectors; appearing as witnesses in Regional Board enforcement hearings; and providing copies of inspection reports and other progressive enforcement documentation.
- e) **Participation in a Task Force:** The Discharger, Regional Board, and other stakeholders may form a Storm Water Task Force, the purpose of which is to communicate concerns regarding special cases of storm water violations by industrial and commercial facilities and to develop a coordinated approach to enforcement action.

11. **Municipal Program**

- a. **Components:** The Discharger shall implement a Municipal Program to prevent or reduce pollutants in runoff from all municipal land use areas, facilities, and activities. At a minimum the Municipal Program shall consist of:
 - i Sewage System Maintenance, Overflow, and Spill Prevention
 - ii Public Construction Activities Management
 - iii Vehicle Maintenance/Material Storage Facilities/Corporation Yards Management
 - iv Landscape and Recreational Facilities Management
 - v Storm Drain Operation and Management
 - vi Streets and Roads Maintenance
 - vii Parking Facilities Management
 - viii Public Industrial Activities Management
 - ix Emergency Procedures
 - x Treatment Feasibility Study
- b. **Discussion of Components**
 - i Sewage System Maintenance, Overflow, and Spill Prevention

- a) Within their respective jurisdictions, The Discharger shall implement a response plan for overflows of the sanitary sewer system which shall consist at a minimum of the following:
 - i) Investigation of any complaints received;
 - ii) Upon notification, immediate response to overflows for containment; and
 - iii) Notification to appropriate sewer and public health agencies when a sewer overflows to the MS4.
- b) In addition to b.i.a)i) through b.i.a)iii) above, for those Dischargers, which own and/or operate a sanitary sewer system, the Discharger shall also implement the following requirements:
 - i) Procedures to prevent sewage spills or leaks from entering the MS4; and
 - ii) Identify, repair, and remediate sanitary sewer blockages, exfiltration, overflow, and wet weather overflows from sanitary sewers to the MS4.

ii Public Construction Activities Management

- a) The Discharger shall implement the Development Standard requirements at public construction projects.
- b) The Discharger shall implement the Construction Program requirements at Discharger owned construction sites.
- c) The Discharger shall obtain coverage under the General Permit for construction activity for public construction sites five acres or greater (or part of a larger area of development).
- d) By **10 March 2003**, The Discharger shall obtain coverage under a statewide general construction storm water permit for public construction sites for projects between one and five acres.

iii Vehicle Maintenance/Material Storage Facilities/Corporation Yards Management

- a) The Discharger, consistent with the SWMP, shall implement SWPPPs for public vehicle maintenance facilities, material storage facilities, and corporation yards which have the potential to discharge pollutants into storm water.
- b) The Discharger shall implement BMPs to minimize pollutant discharges in storm water including but not be limited to:
 - i) Good housekeeping practices;
 - ii) Material storage control;
 - iii) Vehicle leaks and spill control; and

iv) Illicit discharge control.

- c) The Discharger shall implement the following measures to prevent the discharge of pollutants to the MS4:
- i) For existing facilities that are not already plumbed to the sanitary sewer, all vehicle and equipment wash areas (except for fire stations) shall either be:
 - Self-contained;
 - Equipped with a clarifier;
 - Equipped with an alternative pre-treatment device; or
 - Plumbed to the sanitary sewer
 - ii) For new facilities, or during redevelopment of existing facilities (including fire stations), all vehicle and equipment wash areas shall be plumbed to the sanitary sewer and be equipped with a pre-treatment device in accordance with requirements of the sewer agency.

iv Landscape and Recreational Facilities Management

The Discharger shall implement the following requirements:

- a) A standardized protocol for routine and non-routine application of pesticides, herbicides (including pre-emergents), and fertilizers;
- b) Consistency with the State Board's guidelines and monitoring requirements for application of aquatic pesticides to surface waters (WQ Order No. 2001-12 DWQ);
- c) Ensure no application of pesticides or fertilizers immediately before, during, or immediately after a rain event or when water is flowing off the area to be applied;
- d) Ensure no application or storage of banned or unregistered;
- e) Ensure that staff applying pesticides are certified by the California Department of Food and Agriculture, or are under the direct supervision of a certified pesticide applicator;
- f) Implement procedures to 1) encourage retention and planting of native vegetation and 2) to reduce water, fertilizer, and pesticide needs;
- g) Store fertilizers and pesticides indoors or under cover on paved surfaces or use secondary containment;

- h) Reduce the use, storage, and handling of hazardous materials to reduce the potential for spills; and
- i) Regularly inspect storage areas.

v Storm Drain Operation and Management

- a) The Discharger shall designate catch basin inlets to category A, B and C. within its jurisdiction based on the degree of required maintenance.
- b) By **1 April 2003**, The Discharger shall prioritize and label all catch basins within its jurisdiction.
- c) The Dischargers shall clean their catch basins to ensure that none of the catch basins will exceed 40 percent of their capacity. After **1 April 2003**, the Discharger shall ensure that any catch basin that is at least twenty-five (25) percent full of trash and debris shall be cleaned out.
- d) For any special event that can be reasonably expected to generate substantial quantities of trash and litter, include provisions that require for the proper management of trash and litter generated, as a condition of the special use permit issued for that event. At a minimum, the municipality who issues the permit for the special event shall arrange for either temporary screens to be placed on catch basins or for catch basins in that area to be cleaned out subsequent to the event and prior to any rain event.
- e) The Discharger shall inspect the legibility of the catch basin stencil or label nearest the inlet. Catch basins with illegible stencils shall be recorded and re-stenciled or re-labeled within one hundred eighty (180) days of inspection.
- f) The Discharger shall keep records of catch basins cleaned and maintained.
- g) The Discharger shall implement BMPs for Storm Drain Maintenance that include:
 - i) A program to visually monitor Discharger-owned open channels and other drainage structures for debris at least annually and identify and prioritize problem areas of illicit discharge for regular inspection;
 - ii) A review of current maintenance activities to ensure that appropriate storm water BMPs are being utilized to protect water quality;
 - iii) Removal of trash and debris from open channel storm drains shall occur a minimum of once per year before the storm season;

- iv) Minimize the discharge of contaminants during MS4 maintenance and clean outs;
- v) Proper disposal of material removed; and
- vi) Record keeping of open channels and other drainage structures cleaned and maintained.

vi Streets and Roads Maintenance

- a) The Discharger shall designate streets and/or street segments within its jurisdiction based on the required level of maintenance.
- b) The Discharger shall perform street sweeping of curbed streets to ensure that streets and roads be maintained to the MEP.
- c) The Discharger shall require that:
 - i) Sawcutting wastes be recovered and disposed of properly and that in no case shall waste be left on a roadway or allowed to enter the storm drain;
 - ii) Concrete and other street and road maintenance materials and wastes shall be managed to prevent discharge to the MS4; and
 - iii) The washout of concrete trucks and chutes shall only occur in designated areas and never discharged to storm drains, open ditches, streets, or catch basins.
- d) By **1 April 2003**, The Discharger shall train its employees in targeted positions (whose interactions, jobs, and activities affect storm water quality) regarding the requirements of the storm water management program as follows:
 - i) Promote a clear understanding of the potential for maintenance activities to pollute storm water; and
 - ii) Identify and select appropriate BMPs.

vii Parking Facilities Management

Discharger-owned parking lots exposed to storm water shall be kept clear of debris and excessive oil buildup and cleaned no less than two (2) times per month and/or inspected no less than two (2) times per month to determine if cleaning is necessary. In no case shall the Discharger-owned parking lot be cleaned less than once a month.

viii **Emergency Procedures**

The Discharger shall repair essential public services and infrastructure in a manner to minimize environmental damage in emergency situations such as earthquakes, fires, floods, landslides, or windstorms. BMPs shall be implemented to the extent that measures do not compromise public health and safety. After initial emergency response or emergency repair activities have been completed, The Discharger shall implement BMPs and programs as required under this Order.

ix **Treatment Feasibility Study**

The Discharger shall conduct a study to investigate the possible diversion of dry weather discharges or the use of alternative Treatment Control BMPs to treat flows from their jurisdiction, which may impact public health and safety and/or the environment. The Discharger shall collectively review prioritized lists and create a watershed based priority list of drains for potential diversion or treatment and submit the priority listing to the Regional Board by **1 September 2003**.

12. **Illicit Discharge Detection and Elimination Program**

- a. **General:** The Discharger shall implement an Illicit Discharge Detection and Elimination Program containing measures to actively seek and eliminate illicit discharges and connections. At a minimum the Illicit Discharge Detection and Elimination Component shall address:
 - i Dry Weather Analytical Monitoring
 - ii Investigation/Inspection and Follow-up Procedures
 - iii Elimination of Illicit Discharges and Connections
 - iv Enforcement of Ordinance
 - v Prevention and Response Procedures to Sewage Spills (including from private laterals) and Other Spills
 - vi Public Reporting of Illicit Discharges and Connections – Public Hotline
 - vii Appropriate Disposal of Used Oil and Toxic Materials
 - viii Prevention of Infiltration from Sanitary Sewer to MS4s.
- b. **Training:** By **1 April 2003**, the Discharger shall train all their targeted employees who are responsible for identification, investigation, termination, cleanup, and reporting of illicit connections and discharges.
- c. **Illicit Connections**
 - i Screening for Illicit Connections
 - a) **Field Screening:** The Discharger shall field screen the storm drain system for illicit connections in accordance with the following schedule:

- i) Open channels: No later than 1 September 2003; and
- ii) Underground pipes with a diameter of 36 inches or greater: No later than **1 April 2006**.

The Discharger shall maintain a list containing all permitted connections and the status of connections under investigation for possible illicit connection.

- b) Permit Screening: By **1 September 2006**, the Discharger shall complete a review of all permitted connections to the storm drain system, to confirm compliance with the **Discharge Prohibitions of this Order**.

ii Response to Illicit Connections

- a) Investigation: Upon discovery or upon receiving a report of a suspected illicit connection, the Discharger shall initiate an investigation within twenty-one (21) days, to determine the source of the connection, the nature and volume of discharge through the connection, and the responsible party for the connection.
- b) Termination: Upon confirmation of the illicit nature of a storm drain connection, the Discharger shall ensure termination of the connection within One hundred eighty (180) days, using enforcement authority as needed.

d. **Illicit Discharges**

- i Abatement and Cleanup: The Discharger shall respond, within one business day of discovery or a report of a suspected illicit discharge, with activities to abate, contain, and clean up all illicit discharges, including hazardous substances.
- ii Investigation: The Discharger shall investigate illicit discharges as soon as practicable (during or immediately following containment and cleanup activities), and shall take enforcement action as appropriate

13. **Public Outreach and Public Education Program:** The Discharger shall implement a Public Outreach and Public Education (POPEP) program using all media as appropriate to (1) measurably increase the knowledge of target communities regarding MS4s, impacts of urban runoff on receiving waters, and potential BMP solutions for the target audience; and (2) to change the behavior of target communities and thereby reduce pollutant releases to MS4s and the environment. The Discharger shall incorporate a mechanism for **public participation** in the implementation of the SWMP (i.e., programs that engage the public in cleaning up creeks, removal of litter in river embankments, stenciling of storm drains, etc.). To meet the SWMP objectives and requirements of this Order, at a minimum, the POPEP shall do the following:

- a. By **1 September 2002**, The Discharger shall establish a **HOTLINE** that will serve as the general public reporting contact for reporting clogged catch basin inlets and illicit

discharges/dumping, faded or lack of catch basin stencils, and general storm water management information. The Discharger shall include this information, updated when necessary, in public information, and the government pages of the telephone book, as they are developed/published.

- b. By **1 April 2003**, The Discharger shall implement a POPEP program which must have the following components:
 - i Advertising;
 - ii Media relations;
 - iii Public service announcements;
 - iv "How To" instructional material distributed in a targeted and activity-related manner;
 - v Business, community association, environmental organization, and entertainment industry tie-ins; and
 - vi Events targeted to specific activities and population subgroups.
- c. Address the following target communities:
 - i Municipal Departments and Personnel
 - ii Construction Site Owners and Developers
 - iii Industrial/Commercial Owners and Operators
 - iv General Public, and School Children;
 - v Quasi-Governmental Agencies/Districts (i.e., educational institutions, water districts, sanitation districts, etc.); and
 - vi Residential Community - Activities that must be addressed include:
 - a) Automobile repair and maintenance;
 - b) Automobile washing;
 - c) Automobile parking;
 - d) Home and garden care activities and product use (pesticides, herbicides, and fertilizers);
 - e) Disposal of household hazardous waste (e.g., paints, cleaning products);
 - f) Disposal of pet waste;
 - g) Disposal of green waste;
 - h) Any other residential source that the Discharger determine may contribute a significant pollutant load to the municipal separate storm sewer system; and
 - i) Any residence tributary to a CWA section 303(d) impaired water body or other environmentally sensitive areas.
- d. Based on approximately 190,000 residents in the Modesto Urbanized Area and 3-3.5 impressions per resident, the Discharger shall ensure that a minimum of 600,000 impressions per year are made on the general public about storm water quality via print, local TV access, local radio, or other appropriate media.
- e. Provide schools within each school district in the Modesto Area with materials, including, but not limited to, videos, live presentations, and other information

necessary to educate a minimum of fifty (50) percent of all school children (K-12) every two years on storm water pollution.

- f. Develop and implement a Business Outreach program to educate and inform business owners and operators about storm water regulations, with emphasis on RGOs and restaurant chains. At a minimum, this program shall include:
 - i Conferring with owners and operators to explain storm water regulations;
 - ii Distribution and discussion of educational material regarding storm water pollution and BMPs, and providing owners and operators with suggestions to facilitate employee compliance with storm water regulations.
 - iii Business Outreach for all RGOs and restaurant chains shall be conducted not less than twice during the permit term, with the first outreach contact to begin no later than **1 April 2003**.
 - g. To ensure that the POPEP is demonstrably effective in changing the behavior of the public, the Discharger shall develop a behavioral change assessment strategy by **1 April 2003**. The strategy shall be developed based on sociological data and studies such as the Los Angeles County Segmentation Study. The Discharger shall submit the assessment strategy to the Regional Board Executive Officer for approval. It shall be implemented on approval.
14. **Performance and Effectiveness Evaluation:** The discharger shall assess the effectiveness of its SWMP in the Annual Reports. The assessment shall address specific direct and indirect measurements that the discharger will use to track the long-term progress of the SWMP towards achieving improvements in receiving water quality. Direct and indirect measures of effectiveness assessment shall include, but are not limited to, conformance with established Performance Standards, quantitative monitoring to assess the effectiveness of control measures, measurements or estimates of pollutant load reductions or increases, detailed accounting of SWMP accomplishments, and funds expended or staff hours utilized. Methods to improve effectiveness in the implementation of tasks and activities including development of new, or modification of existing BMPs and Performance Standards, shall be identified through the SWMP effectiveness evaluation. Annual Reports shall also include assessment of its "status of compliance" with each component of the SWMP and this Order.
15. **Fiscal Analysis Element:** The Discharger shall secure the resources necessary to meet the requirements of this Order. As part of its SWMP, the Discharger shall prepare an annual fiscal analysis as part of the Annual Report. This analysis shall, for each fiscal year covered by this Order, evaluate the expenditures (such as capital, operation and maintenance, education, and administrative expenditures) necessary to accomplish the activities outlined in SWMP. Such analysis shall include a description of the source(s) of funds that are proposed to meet the necessary expenditures, including legal restrictions on the use of such funds.

16. **Monitoring Program:** The Discharger shall comply with Monitoring and Reporting Program No. _____, which is part of this Order, and any revisions or modifications thereto as ordered by the Regional Board. Because the Discharger operate facilities which discharge waste subject to this Order, this Monitoring and Reporting Program is necessary to ensure compliance with these waste discharge requirements.

Development Standards

17. The Discharger shall minimize the short and long-term impacts on receiving water quality from new development and redevelopment. In order to reduce pollutants and runoff flows from new development and redevelopment to the MEP, Discharger shall at a minimum:
- a. Incorporate water quality and watershed protection principles and policies into planning procedures and policies such as development standards or requirements to direct land-use decisions and require implementation of consistent water quality protection measures for all development projects. These principles and policies shall be designed to protect natural water bodies, reduce impervious land coverage, slow runoff, and where feasible, maximize opportunities for infiltration of rainwater into soil. Such water quality and watershed protection principles and policies shall include for example:
 - i. Minimize the amount of impervious surfaces and directly connected impervious surfaces in areas of new development and redevelopment and where feasible maximize on-site infiltration of runoff.
 - ii. Implement pollution prevention methods supplemented by pollutant source controls and treatment where practical; use strategies that control the sources of pollutants or constituents (i.e., the point where water initially meets the ground) to minimize the transport of urban runoff and pollutants offsite and into an MS4.
 - iii. Preserve, and where possible, create or restore areas that provide important water quality benefits, such as riparian corridors, wetlands, and buffer zones.
 - iv. Limit disturbances of natural water bodies and natural drainage systems caused by development including roads, highways, and bridges.
 - v. Use methods available to estimate increases in pollutant loads and flows resulting from projected future development. Require incorporation of structural and non-structural BMPs to mitigate the projected increases in pollutant loads and flows.
 - vi. Identify and avoid areas that are particularly susceptible to erosion and sediment loss; or establish development guidance that identifies these areas and protects them from erosion and sediment loss.

- vii Coordinate with local traffic management programs to reduce pollutants associated with vehicles and increasing traffic resulting from development.
 - viii Implement source and structural controls as necessary to protect downstream receiving water quality from increased pollutant loads in runoff flows from new development and significant redevelopment.
 - ix Control pollutant loads that cause a violation of receiving water quality objectives or that have not been reduced to the MEP.
 - x Control the post-development peak storm water run-off discharge rates and velocities to maintain or reduce pre-development downstream erosion, and to protect stream habitat.
 - b. Prior to project approval and issuance of local permits, Discharger shall review each individual proposed project plan and require measures to ensure that pollutants and runoff from the development will be in compliance with storm water ordinances, local permits, all other applicable ordinances and requirements, and this Order.
18. The Discharger has Development Standards requiring source and treatment control BMPs to reduce pollutants from new development and redevelopment areas. The Discharger shall continue to implement its Development Standards for new development and redevelopment projects. To ensure consistency with the applicable portions of State Regional Board Order WQ 2000-11, the Discharger will submit an **Assessment Report** to the Regional Board by **1 September 2002** for review and approval by the Regional Board. At a minimum, the Assessment Report shall provide the following information:
- a. Description of existing Development Standards including project categories, BMP requirements and numeric sizing requirements;
 - b. Comparison of existing development standards to the requirements established under State Board Order WQ 2000-11 and or applicable directives;
 - c. Description of the proposed modifications to the Development Standards to ensure that, at a minimum, consistent with the requirements of State Board Order WQ 2000-11 and applicable policies of the State and Regional Boards.
19. By **1 April 2003**, after approval of the Assessment Report by the Regional Board, the Discharger shall adopt its own local Development Standards and submit the local Development Standards to the Regional Board for review. By **1 September 2003**, the Discharger shall submit to the Regional Board a copy of the amended ordinance for the Regional Board to determine if the amended ordinance is consistent with the approved Assessment Report. If the amended ordinance is not consistent with the approved Assessment Report, the Regional Board shall inform the Discharger.

20. Immediately following adoption of its local Development Standards, the Discharger shall ensure that all new development and significant redevelopment projects falling under the priority project categories listed below meet Development Standards. The Development Standards shall apply to all priority projects or phases of priority projects, which do not have the following: approval by the City or County Engineer, permit for development or construction, or an approved tentative map.
- a. Priority Development Project Categories - New Development standards shall apply to all new development and significant redevelopment projects falling under the priority project categories or locations listed below. Significant redevelopment is defined as the creation or addition of at least 5,000 square feet of impervious surfaces on an already developed site. Significant redevelopment includes, but is not limited to: the expansion of a building footprint or addition or replacement of a structure; structural development including an increase in gross floor area and/or exterior construction or remodeling; replacement of impervious surface that is not part of a routine maintenance activity; and land disturbing activities related with structural or impervious surfaces. Where significant redevelopment results in an increase of less than fifty percent of the impervious surfaces of a previously existing development, and the existing development was not subject to Development Standard requirements, the numeric sizing criteria discussed below applies only to the addition, and not to the entire development.
 - i Home subdivisions of 10 housing units or more. This category includes single-family homes, multi-family homes, condominiums, and apartments.
 - ii Commercial developments with greater than one-acre of impervious area. This category is defined as any development on private land that is not for heavy industrial or residential uses where the total impervious land area for development is greater than one acre. The category includes, but is not limited to: hospitals; laboratories and other medical facilities; educational institutions; recreational facilities; commercial nurseries; multi-apartment buildings; car wash facilities; mini-malls and other business complexes; shopping malls; hotels; office buildings; public warehouses; and other light industrial facilities.
 - iii Automotive repair shops- This category is defined as a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539, where the total impervious area for development is greater than 5,000 square feet
 - iv Restaurants - This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812), where the total impervious area for development is greater than 5,000 square feet.

- v Parking lots that are 5,000 square feet or greater, or with 25 or more parking spaces and potentially exposed to urban runoff. Parking lot is defined as a land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce.
 - vi Streets and roads. This category includes any paved surface in excess of one acre of impervious area used for the transportation of automobiles, trucks, motorcycles, and other vehicles.
 - vii Retail Gasoline Outlets. Retail Gasoline Outlet is defined as any facility engaged in selling gasoline with 5,000 square feet or more of impervious surface area. At a minimum, the Discharger shall require the use of BMPs such as dry cleaning methods (e.g., sweeping) and other BMPs listed in the California Storm Water Quality Task Force, March 1997 BMP Guide for Retail Gasoline Outlets.
- b. BMP Requirements – The New Development standards shall include a list of recommended source control and structural treatment BMPs. The standards shall require all new development and significant redevelopment projects falling under the above priority project categories or locations to implement a combination of BMPs selected from the recommended BMP list, including at a minimum: (1) source control BMPs, and; (2) structural treatment BMPs.
- c. Numeric Sizing Criteria – The New Development standards shall require structural treatment BMPs to be implemented for priority development projects. In addition to meeting the BMP requirements listed above, all structural treatment BMPs for a single priority development project shall collectively be sized to comply with the following numeric sizing criteria:
- i Volume-based BMPs shall be designed to mitigate (infiltrate, filter, or treat) either:
 - a) The volume of runoff produced from a 24-hour 85th percentile storm event, as determined from the local historical rainfall record; or
 - b) The volume of runoff produced by the 85th percentile 24-hour rainfall event, determined as the maximized capture storm water volume for the area, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, (1998); or
 - c) The volume of annual runoff based on unit basin storage volume, to achieve 80% or more volume treatment by the method recommended in California Storm Water Best Management Practices Handbook – Industrial/Commercial, (1993); or
 - ii Flow-based BMPs shall be designed to mitigate (infiltrate, filter, or treat) either:

- a) The maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity, as determined from the local historical rainfall record, multiplied by a factor of two; or
 - b) The maximum flow rate of runoff, as determined from the local historical rainfall record, that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85th percentile hourly rainfall intensity multiplied by a factor of two.
- d. Equivalent Numeric Sizing Criteria - The Discharger may develop any equivalent numeric sizing criteria or performance-based standard for post-construction structural treatment BMPs as part of the New Development Standards. Such equivalent sizing criteria may be authorized for use in place of the above criteria. In the absence of development and subsequent authorization by the Executive Officer of such equivalent numeric sizing criteria, the above numeric sizing criteria requirement shall be implemented.
- e. Pollutants and Activities of Concern – As part of the New Development standards, the Discharger shall identify pollutants of concern or activities of concern for each priority development project. The Discharger shall identify the pollutants of concern by considering the following: (1) receiving water quality [including pollutants for which receiving waters are listed as impaired under Clean Water Act Section 303(d)]; (2) land use type of the development project and pollutants associated with that land use type; (3) pollutants expected to be present on site at concentrations that pose potential water quality concern; (4) activities expected to be present at the site; and (5) changes in flow rates and volumes resulting from the development project.
- f. Implementation Process – As part of the SWMP, the Discharger shall develop a process by building on existing programs upon which New Development standards will be implemented. The process shall identify at what point in the planning process development projects will be required to meet New Development Standards. The process shall also include identification of the roles and responsibilities of various municipal departments in implementing the New Development requirements, as well as any other measures necessary for the implementation of New Development requirements.
- g. Restaurants Less than 5,000 Square Feet - New development and significant redevelopment restaurant projects where the impervious land development is less than 5,000 square feet shall meet all source control requirements except for structural treatment BMP and numeric sizing criteria requirement above.
- h. Infiltration and Groundwater Protection - To protect groundwater quality, the Discharger shall apply restrictions to the use of structural BMPs, which are designed to primarily function as infiltration devices (such as infiltration trenches and infiltration basins).

- i. Downstream Erosion – as part of the Development Standards, the Discharger shall update any existing criteria for new development and significant redevelopment to ensure that discharges from design storms as defined by the Discharger maintain or reduce pre-development downstream erosion and protect stream habitat. At a minimum, criteria shall be developed to control peak storm water discharge rates and velocities in order to maintain or reduce pre-development downstream erosion and protect stream habitat.
- j. Regional Storm Water Management Program –The Discharge is encouraged to seek regional and/or watershed management programs that address runoff from new development and significant re-development. Such regional/watershed programs may be substituted in whole for individual priority project structural controls.

21. Maintenance Agreement and Transfer

The Discharger shall require that all developments subject to Development Standards and site specific plan requirements provide verification of maintenance provisions for Structural and Treatment Control BMPs, including but not limited to legal agreements, covenants, California Environmental Quality Act (CEQA) mitigation requirements, and or conditional use permits. Verification at a minimum shall include:

- a. The developer's signed statement accepting responsibility for maintenance until the responsibility is legally transferred; and either
- b. A signed statement from the public entity assuming responsibility for Structural or Treatment Control BMP maintenance and that it meets all local agency design standards; or
- c. Written conditions in the sales or lease agreement, which requires the recipient to assume responsibility for maintenance and conduct a maintenance inspection at least once a year; or
- d. Written text in project conditions, covenants and restrictions for residential properties assigning maintenance responsibilities to the Home Owners Association for maintenance of the Structural and Treatment Control BMPs; or
- e. Any other legally enforceable agreement that assigns responsibility for the maintenance of post-construction Structural or Treatment Control BMPs.

22. California Environmental Quality Act (CEQA) Document Update

The Discharger shall incorporate into its CEQA process, with immediate effect, procedures for considering potential storm water quality impacts and providing for appropriate mitigation when preparing and reviewing CEQA documents. The procedures

shall require consideration of the following:

- a. Potential impact of project construction on storm water runoff;
- b. Potential impact of project post-construction activity on storm water runoff;
- c. Potential for discharge of storm water from areas from material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas or loading docks, or other outdoor work areas;
- d. Potential for discharge of storm water to impair the beneficial uses of the receiving waters or areas that provide water quality benefit;
- e. Potential for the discharge of storm water to cause significant harm on the biological integrity of the waterways and water bodies;
- f. Potential for significant changes in the flow velocity or volume of storm water runoff that can cause environmental harm; and
- g. Potential for significant increases in erosion of the project site or surrounding areas.

23. General Plan Update

- a. The Discharger shall amend, revise, or update its General Plan to include watershed and storm water quality and quantity management considerations and policies when any of the following General Plan elements are updated or amended: (i) Land Use, (ii) Housing, (iii) Conservation, and (iv) Open Space.
- b. The Discharger shall provide the Regional Board with the draft amendment or revision when a listed General Plan element or the General Plan is noticed for comment in accordance with California Government Code § 65350 *et seq.*

24. Targeted Employee Training

The Discharger shall train its employees in targeted positions (whose jobs or activities are engaged in development planning) regarding the development planning requirements on an annual basis beginning no later than **1 September 2002**, and more frequently if necessary.

25. Developer Technical Guidance and Information

- a. The Discharger shall develop and make available to the developer community Development Standards (development planning) guidelines immediately.
- b. By **1 April 2004**, the Discharger shall issue a technical manual for the siting and design of BMPs for the development community in the Modesto Area. The technical manual may be adapted from the revised California Storm Water Quality Task Force Best Management Practices Handbooks scheduled for publication in September 2002. The technical manual shall at a minimum include:

- i Treatment Control BMPs based on flow-based and volumetric water quality design criteria for the purposes of consistency in the Modesto Area;
- ii Peak Flow Control criteria to control peak discharge rates, velocities and duration;
- iii Expected pollutant removal performance ranges obtained from national databases, technical reports and the scientific literature;
- iv Maintenance considerations; and
- v Cost considerations.

Water Quality Based Control Programs

- 28. Quality-Based Requirements for Specific Pollutants of Concern:** The Discharger shall implement control programs for pollutants that have the reasonable potential to cause or contribute to exceedances of water quality standards. These control programs shall include the following:
- a. **Control Program for Pesticides:** To address pesticide impairment of urban streams, the Discharger shall implement a pesticide toxicity control plan (Pesticide Plan) that addresses their own use of pesticides including diazinon, chlorpyrifos, and the use of such pesticides by other sources within their jurisdictions. The Discharger may address this requirement by building upon prior submissions to the Regional Board.
 - b. **Pesticide Use by Discharger:** The Pesticide Plan shall include a program to quantitatively identify pesticide use by preparing a periodically updated inventory of pesticides used by all internal departments, divisions, and other operational units. The Pesticide Plan shall include implementing actions to replace pesticide use (especially diazinon use) with less toxic alternatives. The Discharger shall adopt and implement policies, procedures, and/or ordinances requiring the minimization of pesticide use and the use of Integrated Pest Management (IPM) techniques in operations. The Discharger shall ensure that all municipal employees who apply pesticides receive annual training and are under the supervision of a certified pesticide applicator. The training shall address proper use and disposal of such pesticides, and least toxic methods of pest prevention and control, including IPM. The Pesticide Plan shall also be subject to updating via the Discharger's continuous improvement process.
 - c. **Other Pesticide Sources:** To address other pesticide users within the Discharger's jurisdiction, the Pesticide Plan shall include the following elements:
 - i. Public education and outreach programs. Such programs shall be designed for residential and commercial pesticide users and pest control operators. These programs shall be developed in coordination with the County Agriculture Extension Service and shall provide targeted information concerning proper pesticide use and disposal, potential adverse impacts on water quality, and alternative, less toxic methods of pest prevention and control, including IPM. These programs shall also target pesticide retailers to encourage the sale of less

toxic alternatives and to facilitate point-of-sale public outreach efforts. These programs may also recognize local least toxic pest management practitioners.

- ii. Public surveys of residential and commercial pest control products that could potentially be found in storm water. The first survey shall be conducted by **30 June 2003**.
 - iii. Mechanisms to discourage pesticide use at new development sites. Such mechanisms shall encourage the consideration of pest-resistant landscaping and design features, and incorporation of storm water source control and treatment control BMPs in the design, landscaping of proposed development projects.
 - iv. Coordination with household hazardous waste collection agencies. The Discharger shall support, enhance, and help publicize programs for proper pesticide disposal.
 - v. The Pesticide Plan shall include a schedule for implementation and a mechanism for reviewing and amending the plan, as necessary, in subsequent years. The Pesticide Plan shall be submitted to the Executive Officer by 1 April 2003.
 - d. **Other Pesticide Activities:** The Discharger shall work with the pesticide control stakeholders and other municipal storm water management agencies to assess which pesticide products and uses pose the least risks to surface water quality. The Discharger shall also work with the Regional Board and other agencies in developing a TMDL for pesticides in impaired urban creeks and other tributaries to the Tuolumne River. The Discharger will participate in stakeholder forums to assist the Regional Board in completing the TMDL.
- 29. Characterization Report:** By **1 September 2002** the Discharger shall evaluate and prioritize the constituents in its discharge and develop work plan(s) for constituents determined to be constituents of concern. This report shall consider and expand on the previous effort by the Discharger to develop a list of constituents of concern and constituents of interest. The report shall include the following:
- a. Characterization of stormwater discharges from representative drainage areas.
 - b. Prioritization of the constituents found in stormwater discharges. The prioritization shall consider the following:
 - i. Constituents listed as causing impairment in the San Joaquin River and Lower Tuolumne River and present in the Discharge .
 - ii. Constituents causing toxicity in urban runoff or local receiving waters.

- iii. Pollutants identified in urban runoff that may cause or contribute to exceedances of water quality standards in the Central Valley Region Water Quality Control Plan (Basin Plan) and California Toxic Rules.
- iv. Issues of significant public or regulatory concern.
- v. Controllability of urban runoff constituents through implementation of available control practices.
- c. Identify sources of the constituents determined to be constituents of concern. This effort will include identifying controllable and non-controllable sources (including aerial deposition) of the constituent.
- d. Development of work plans for controlling constituents of concern. The work plans shall evaluate the effectiveness of BMPs currently being implemented and additional BMPs that may be implemented to prevent or reduce the constituents of concern. The evaluation shall consider capital and operation costs, technical feasibility, regulatory limitations, and other consideration identified by the Discharger. The work plans shall also identify institutional needs, including policies, procedures, and/or ordinances, for addressing the constituents of concern. If applicable, the work plans shall identify stakeholder opportunities for the Discharger to pursue in addressing the constituents of concern.

Additional Requirements

- 30. This Order may be modified, or alternatively, revoked or reissued, prior to the expiration date as follows: a) to address significant changed conditions identified in the technical reports required by the Regional Board which were unknown at the time of the issuance of this Order; b) to incorporate applicable requirements of statewide water quality control plans adopted by the State Board or amendments to the Basin Plan approved by the State Board; or c) to comply with any applicable requirements, guidelines, or regulations issued or approved under Section 402(p) of the CWA, if the requirement, guideline, or regulation so issued or approved contains different conditions or additional requirements not provided for in this Order. The Order as modified or reissued under this paragraph shall also contain any other requirement of the CWA when applicable.
- 31. The Discharger shall comply with all applicable items of the "Standard Provisions and monitoring Requirements for Waste Discharge Requirements (NPDES)," dated 1 March 1991, which are part of this Order. This attachment and its individual paragraphs are referred to as "Standard Provisions."
- 32. This Order expires on _____. The Discharger must file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of such date as application for re-issuance of waste discharge requirements.

WASTE DISCHARGE REQUIREMENTS ORDER NO.
CITY OF MODESTO
MUNICIPAL SEPARATE STORM SEWER SYSTEM
STANISLAUS COUNTY

-49-

I, GARY M. CARLTON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on _____.

GARY M. CARLTON, Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2002-XXX

NPDES NO. CA0083526

FOR
CITY OF MODESTO
STORM WATER DISCHARGES FROM MUNICIPAL
SEPARATE STORM SEWER SYSTEM
STANISLAUS COUNTY

I. **MONITORING PROGRAM REQUIREMENTS**

This Monitoring and Reporting Program (MRP) is issued pursuant to Water Code Section 13267. Because the Discharger operates facilities which discharge waste subject to storm water regulations, Monitoring and Reporting Program No. R5-2002-XXX is necessary to ensure compliance with this Order No. R5-2002-XXX.

The Discharger shall not implement any changes to this MRP unless and until the Regional Board or Executive Officer issues a revised MRP. **Attachment A** shows a map of the City of Modesto and the service area covered under this Order.

- A. **MRP Work Plan:** By **1 September 2002**, the Discharger shall submit an MRP Work Plan that supports the development, implementation, and effectiveness of the approved SWMP, and compliance with the maximum extent practicable (MEP) requirement and the receiving water limitations of Order No. R5-2002-XXX.
- B. **Annual Report:** The Discharger shall submit, in both electronic and paper formats and no later than **1 September** of each year beginning in year 2003, an Annual Report documenting the progress of the Discharger's implementation of the SWMP and the requirements of this Order. The Annual Report shall cover each fiscal year from **1 July through 30 June**. The Annual Report shall use the attached form (**Attachment B**), or create another reporting format that includes all items on the attached form. The status of compliance with the permit requirements including implementation dates for all time-specific deadlines should be included for each program area. If permit deadlines are not met, the Discharger shall report the reasons why the requirement was not met and how the requirements will be met in the future, including projected implementation dates. A comparison of program implementation results to performance standards established in the SWMP and this Order shall be included for each program area. Specific requirements that must be addressed in the Annual Reports are listed below.
 - 1. An Executive Summary discussing the effectiveness of the SWMP to reduce storm water pollution to the MEP.

2. Summary of activities conducted by the Discharger;
3. Identification of BMPs and a discussion of their effectiveness at reducing urban runoff pollutants and flow;
4. Summary of monitoring data, including identification of water quality improvements or degradation, and recommendations for improvements to the SWMP (including proposed BMPs) based on the monitoring results. All data shall be compared to applicable water quality standards in the Basin Plan, the California Toxics Rule (CTR), and California Title 22 (Title 22);
5. An assessment of compliance with applicable water quality standards for each component of the monitoring program. The assessment shall include the identification of water quality improvements or degradation. The lowest applicable standard from the Basin Plan, CTR, and Title 22 shall be used for comparison. When the data indicate that discharges are causing or contributing to exceedances of applicable water quality standards, a discussion of how the Discharger plans to comply with **Provisions 1 and 2** of Order No. R5-2002-XXX shall be included. In addition, the analysis shall identify and prioritize water quality problems. Based on the identification and prioritization of water quality problems, the analysis shall identify potential sources of the problems, and recommend future monitoring and BMP implementation measures to identify and address the sources;
6. Identification and analysis of any long-term trends in storm water or receiving water quality.
7. An estimation of total pollutant loads due to storm water/urban runoff for each sampling station;
8. For each monitoring component, maps of all monitoring station locations and descriptions of each location; and
9. Recommendations to improve the monitoring program, BMPs, Performance Standards, and the SWMP to address water quality exceedances and potential pollutant sources, and to meet the MEP.

- C. **Certification:** All work plans and reports submitted to the Regional Board shall be signed and certified pursuant to Federal regulations at 40 CFR 122.41 (k). Each report shall contain the following completed declaration:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted.

Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility, of a fine and imprisonment for knowing violations.

Executed on the ___ day of _____, 20__.

at _____.

(Signature)_____ (Title)_____";

The Discharger shall mail the original of each annual report to:

CALIFORNIA REGIONAL WATER QUALITY
CONTROL BOARD – CENTRAL VALLEY REGION
3443 ROUTIER ROAD, SUITE A
SACRAMENTO, CA 95827

A copy of the annual report shall also be mailed to:

REGIONAL ADMINISTRATOR
ENVIRONMENTAL PROTECTION AGENCY
REGION 9
75 Hawthorne Street
San Francisco, CA 94105

II. MONITORING PROGRAM

The primary objectives of the Monitoring Program include, but are not limited to:

- Assessing compliance with this Order;
- Measuring and improving the effectiveness of the SWMPs;
- Assessing the chemical, physical, and biological impacts of receiving waters resulting from urban runoff;
- Characterization of storm water discharges;
- Identifying sources of pollutants; and
- Assessing the overall health and evaluating long-term trends in receiving water quality.

The Modesto storm drainage system is unique since only one-third of the city area drains directly to surface waters (positive storm drain system). The other two-thirds of the city area drains into rock wells. The positive storm drain system covers approximately 6,650 acres of the urban area with 33-percent draining to the Tuolumne River (0.9 percent of the Tuolumne River's total drainage area at that location), 54-percent to Dry Creek, and 13-percent to Modesto Irrigation Canals (MID Canals).

Ultimately, the results of the monitoring requirements outlined below should be used to refine the SWMP to reduce pollutant loadings and protect and enhance the beneficial uses of the receiving waters in the Modesto Urbanized Area.

At a minimum, the Discharger shall conduct the following monitoring over the next five program years:

- (a) Receiving Water Monitoring
- (b) Urban Discharge Monitoring
- (c) Dry weather monitoring;
- (d) Detention basin monitoring.
- (e) Rock well and Groundwater monitoring
- (f) Tributary Monitoring (MID Canals 3 and 7)
- (g) Water Column Toxicity Monitoring
- (h) Bio-assessment Monitoring

Table 1 provides the schedule for the five-year monitoring program.

Table 1. Five-Year Monitoring Program Schedule

Monitoring Type	2002/03	2003/04	2004/05	2005/06	2006/07
Receiving water monitoring (Dry and Wet Season)		3 times/year @ 4 sites	3 times/year @ 4 sites	3 times/year @ 4 sites	3 times/year @ 4 sites
Bio-assessment Monitoring					
Urban discharge monitoring (Dry and Wet Season)	2 times/year @ 2 sites		2 times/year @ 2 sites		2 times/year @ 2 sites
Dry weather/monitoring	2-years monitoring & review		Continue monitoring based on evaluation of first 2 years		
Basin monitoring		2 basins		2 basins	
Rock Well and Groundwater Monitoring	Assessment Plan	Implement monitoring identified in approved Assessment Plan			

A. Sampling Protocol

1. Samples from each station described below shall be analyzed for all constituents listed in Table 2. All sample collection and analyses shall follow standard U.S. Environmental Protection Agency (U.S. EPA) protocol.
2. If a constituent is not detected at the method detection limit for its respective test method listed in Table 2 in more than 75 percent of the first 48 sampling events, it need not be further analyzed unless the observed occurrences show concentrations greater than state water quality standards. The Discharger will also conduct annual confirmation sampling for non-detected constituents during the first storm of the wet season every year at each station.
3. Each station shall be sampled and analyzed for total suspended solids (TSS) during all storms events that result in at least 0.25 inch of rainfall. Results shall be used to assess the variability of storm water constituents and provide a more accurate estimate of pollutant loading (pollutant correlation with TSS).
4. The Discharger shall perform an annual analysis, to be included in the Annual Report, of the correlation between pollutants of concern (including but not limited to metals and PAHs) and TSS loadings for the sampling events that are analyzed for the full suite of constituents.

B. Urban Discharge Monitoring

Based on the land usage the Discharger has identified the following two locations for monitoring purposes:

- (i) Scenic Drive--receives runoff from the Sonoma neighborhood, an entirely residential neighborhood; and
- (ii) Bodem Street--receives runoff from the McHenry Avenue Corridor, a mixed residential/commercial land

The Discharger monitored the same stations during the prior permit term. Use of the same location will allow the Discharger to maintain consistency and compare the data obtained during the previous discharge monitoring studies. The Discharger shall monitor storm water discharges for every other year (three years) during the five-year term of the permit starting with the 2002/03 wet season. The proposed monitoring will allow Modesto to continue to characterize storm water discharges and track water quality constituent levels.

If additional sample station locations are needed, they shall be established under the direction of The Regional Board staff, and a description of the location shall be attached to this MRP. Sample collection and analysis shall follow standard U.S. EPA protocol. Samples shall be collected **twice during the wet season and once during the dry season**

C. Receiving Water Monitoring

Receiving water monitoring shall be conducted on Dry Creek and the Tuolumne River during Year 2 through Year 5 of the permit term. The purpose of receiving water monitoring will be to develop baseline water quality data on the receiving water and to assess any impacts from Modesto urban runoff on the beneficial uses of the receiving water. Receiving water monitoring shall include water chemistry monitoring and bioassessment monitoring.

The receiving water chemistry monitoring will be performed in the Tuolumne River and Dry Creek, the two major water bodies, which receive Modesto urban runoff. Monitoring shall be conducted at two sites (upstream and downstream) for each receiving water location. If additional sample station locations are needed, they shall be established under the direction of The Regional Board staff, and a description of the location shall be attached to this MRP. Sample collection and analysis shall follow standard U.S. EPA protocol. Receiving water monitoring shall be conducted **during the two storm events and once during the dry season.**

The **bio-assessment monitoring** will be performed along two reaches of Dry Creek, upstream and downstream of the Modesto urban area. Bioassessment monitoring

shall be performed two times per year during Year 3 and Year 4 of the permit term and during non-storm events.

At a minimum the discharger will monitor the constituents listed in **Table 2** as part of the discharge monitoring and the receiving water monitoring. However, additional constituents may be added to the list if new water quality issues develop over the course of this permit term

D. Dry Weather Monitoring

The Discharger shall conduct dry weather urban run-off monitoring over approximately one-fifth of its drainage area each year for five years. After two years of dry weather monitoring the Discharger may evaluate the dry weather data and may propose to the Regional Board to discontinue the dry weather monitoring if sufficient justification exists.

In order to determine quality of discharge entering the rock wells, the Discharger shall conduct dry weather monitoring of rock wells. The Discharger shall collect at least 20 representative dry weather samples of flows entering the rock well system. Also, during the dry weather period, the Discharger shall conduct visual observation of rock well areas.

Dry weather sampling sites for the positive storm drain system will be located at storm drain outfalls greater than 24 inches in diameter or at the nearest manhole upstream of the outfall. For the positive drain system, all these outfalls will be monitored once. At a minimum the following constituents shall be monitored as part of the dry weather monitoring.

pH
Chlorine (total)
Copper
Phenol
Surfactants
Oil and Grease

E. Detention Basin Monitoring

The Discharger shall develop a plan to perform influent and effluent monitoring, and sediment chemistry monitoring of two detention basins during Year 2 and 4 of the permit term. This monitoring will be designed to evaluate the effectiveness of the detention basin in removing pollutants. The following constituents will be monitored as part of the sediment-monitoring program:

E. Detention Basin Monitoring (Continued)

Arsenic
Barium
Mercury
Selenium
Silver
Lead
Copper
Chromium
Nickel
Zinc
Total Petroleum Hydrocarbons (TPH)
Total Recoverable Petroleum Hydrocarbons (TRPH)

F. **Rock Well Monitoring**

Within four months of the date of this MRP the Discharger shall submit a **Rock Well Assessment Plan**. The plan shall recommend a monitoring program for assessing the effectiveness of the rock wells in protecting groundwater. The assessment shall include at a minimum following:

- Representative rock wells for monitoring (minimum of two) based on land use, runoff characteristics, rock well installation, soil conditions, and potential for groundwater impact.
- Sampling plan that includes runoff characterization, groundwater quality, and, if applicable, vadose zone and soil characterization. Sampling plan shall also include monitoring frequency and duration (minimum of two years) for adequately characterizing groundwater impacts from rock wells.
- Coordination with USGS ongoing National Water Quality Assessment Program and Modesto Irrigation District efforts to characterize sources of pollutants and track groundwater contamination. The Discharger shall coordinate with USGS to combine or complement monitoring efforts to optimize the rock well assessment.
- Schedule for completing the assessment and preparing a final report. The final report shall include summary of monitoring data, analysis of groundwater impact, and recommendations regarding rock wells installation and maintenance for the protection of groundwater quality

G. **Water Column Toxicity Monitoring**

The Discharger shall analyze samples to evaluate the extent and causes of toxicity in receiving waters and to modify and utilize the SWMP to implement practices that

eliminate or reduce sources of toxicity in storm water.

The Discharger shall analyze samples from two storm events (including the first storm of each year) and one dry weather event from each Urban Discharge Monitoring station for toxicity every year. At least one freshwater species shall be used for toxicity testing. Specifically, *Ceriodaphnia dubia* (water flea) shall be used.

1. Toxicity Identification Evaluations (TIE)

The Discharger shall begin a Phase I TIE immediately on all samples that are substantially toxic to either test species. If a sample is substantially toxic to both species, a TIE shall be performed for both species. Substantial toxicity means the amount of toxicity necessary to successfully conduct a Phase I TIE. For example, *Ceriodaphnia* TIEs require at least 50% mortality in undiluted sample at any time during the 7-day duration of the initial chronic bioassay.

2. Toxicity Reduction Evaluations (TRE)

- a. If a discharge from the MS4 is identified to cause or contribute to toxicity in a receiving water body, a TRE shall be performed. TRE development shall be performed by a neutral third party, with input from the Discharger and Regional Board staff. The TRE shall include all reasonable steps to identify the source(s) of toxicity and discuss appropriate BMPs to eliminate the causes of toxicity. Once the source of toxicity and appropriate BMPs are identified, the Discharger shall submit the TRE to the Regional Board Executive Officer for approval. At a minimum, it shall include a discussion of the following items:
 - i. The potential sources of pollutant(s) causing toxicity;
 - ii. Recommended BMPs to reduce the pollutant(s) causing toxicity;
 - iii. Proposed changes to the SWMP to reduce the pollutant(s) causing toxicity; and
 - iv. Suggested follow-up monitoring to demonstrate that toxicity has been removed.
- b. If TRE implementation for a specific pollutant coincides with TMDL implementation for that pollutant, the efforts may be coordinated.
- c. Upon approval by the Regional Board Executive Officer, the Discharger shall implement the recommended BMPs and take all reasonable steps necessary to eliminate toxicity.
- d. The Discharger shall develop a maximum of two TREs per year. If

applicable, the Discharger may use the same TRE for the same toxic pollutant or pollutant class in different watersheds or basins. The TRE process shall be coordinated with Total Maximum Daily Load (TMDL) development and implementation (For example, if a TMDL for zinc is being implemented when a TRE for zinc is required, the efforts shall be coordinated to avoid overlap).

- e. The Discharger shall report on the development, implementation, and results for each TRE in the Annual Reports, beginning the year following the identification of each pollutant or pollutant class causing toxicity.

H. **Tributary Monitoring**

The Discharger shall monitor MID Canal # 3, at least for 2 seasons during the permit term, to (1) identify sub-watersheds where storm water discharges are causing or contributing to exceedances of water quality standards, and (2) to identify drainage areas that may require further investigation of pollutant sources. The Discharger shall develop and implement a watershed-based tributary monitoring program as described below:

1. The Discharger shall monitor Modesto Irrigation Canal 3 at least for two seasons during the term of the permit. Any exceedance of water quality standards will be investigated through the preparation of Report of Water Quality Exceedance as required by this Order.
2. The Discharger shall monitor the first storm event and at least one additional storm event during each storm season. At least one dry weather flow per year shall also be sampled.
3. Samples shall be flow-weighted composites, collected during the first 3 hours or for the duration of the storm if it is less than 3 hours. Samples may be collected manually or automatically. A minimum of 3 sample aliquots, separated by a minimum of 15 minutes, shall be taken within each hour of discharge¹, unless the Regional Board Executive Officer approves an alternate protocol. Samples shall be taken just upstream of the tributary's confluence with the mainstream. Constituents to be analyzed for each location shall include the following:
 - a. pH, dissolved oxygen, temperature, conductivity, and total suspended solids;
 - b. Indicator bacteria;
 - c. All priority pollutants (Table 2) for the first storm of the year;
 - d. All constituents for which the water body is impaired downstream of

¹ Required in 40 CFR 122.21(g)(7)(ii), and described in NPDES Storm Water Sampling Guidance Document EPA 833-B-92-001. Time-weighted samples may be appropriate if flow is measured during sampling.

- the monitoring station²;
- e. All constituents that caused toxicity or exceeded any applicable water quality criteria at the associated mass emission station the previous year. These constituents shall be listed in the Annual Report.
- f. Flow (flow may be estimated using U.S. EPA methods³ at sites where flow measurement devices are not in place).

I. Bio-assessment

The Discharger shall participate and coordinate with the Surface Water Ambient Monitoring Program (SWAMP) being developed by the State Board to complete this requirement. The SWAMP has begun work on a statewide effort to determine how to identify reference sites with the goal of Index of Biological Integrity (IBI) development.

The purpose of this requirement is to detect biological trends in receiving waters and to collect data for the development of an Index of Biological Integrity (IBI). The ultimate goals of bioassessment are to assess the biological integrity of receiving waters, to detect biological responses to pollution, and to identify probable causes of impairment not detected by chemical and physical water quality analysis.

1. The Discharger shall participate and coordinate with SWAMP to identify the most appropriate locations for bioassessment stations within Modesto area.
2. The Discharger shall propose a tributary monitoring program by **1 April 2003**. Sampling shall begin immediately after approval of the sampling stations by the Executive Officer. A minimum of three replicate samples shall be collected at each station during each sampling event.
3. The Discharger shall develop Standard Operation Procedures (SOPs) for the bio-assessment monitoring program that describes all procedures and responsible parties. The Standard Operation Procedures (SOPs) must contain step-by-step field, laboratory, data entry, and QA/QC procedures. A copy of the SOPs shall be available to the Executive Officer upon request.
4. Field sampling must conform to the SOPs established for the California Stream Bioassessment Procedure (CSBP)⁴ when appropriate. For sampling of aquatic environments where the CSBP is not appropriate (e.g., an estuary or unwadable

² The 1998 California 303(d) List and TMDL Priority Schedule lists pollutants for which each water body is impaired, www.swrcb.ca.gov/tmdl/docs/303d98.pdf#reg4

³ NPDES Storm Water Sampling Guidance Document, EPA 833-B-92-001, July 1992

⁴ California Stream Bioassessment Procedure (Protocol Brief for Biological and Physical/Habitat Assessment in Wadable Streams), California Department of Fish and Game - Aquatic Bioassessment Laboratory, May 1999. Located at www.dfg.ca.gov/cabw/protocols.html.

stream), the California Department of Fish and Game (DFG) and the Executive Officer shall be consulted in order to determine the most appropriate protocol to be implemented. Field crews shall be trained on aspects of the protocol and appropriate safety issues. All field data and sample Chain of Custody (COC) forms must be examined for completion and errors by the field crews, the receiving laboratory, and the Discharger. These forms shall be available to DFG or the Executive Officer upon request.

5. Field inspections should be planned with random visits and should be performed by the Discharger, if properly trained in CSBP methods. A professional environmental laboratory shall perform all laboratory, quality assurance, and analytical procedures.
6. Taxonomic identification laboratories process the biological samples that usually consist of subsampling organisms, enumerating and identifying taxonomic groups and entering the information into an electronic format. There should be intra-laboratory QA/QC results for subsampling, taxonomic validation and corrective actions. Biological laboratories should also maintain reference collections, vouchered specimens and remnant collections. Biological laboratories shall participate in an inter-laboratory (external) taxonomic validation program at a recommended level of 20% for the first two years of the program. If there are no substantial QA/QC problems, the level of external validation may be decreased to 10% in year three upon approval from the Executive Officer. External QA/QC should be arranged through the California Department of Fish and Game's Aquatic Bioassessment Laboratory in Rancho Cordova.
7. Sampling, laboratory, quality assurance, and analysis procedures shall follow the standardized "Non-point Source Bioassessment Sampling Procedures" for professional bioassessment as set forth in the California Department of Fish and Game California Stream Bioassessment Procedure (CSBP)⁵. The following results and information shall be included in the annual Monitoring Report:
 - a. All physical, chemical and biological data collected in the assessment;
 - b. Photographs and GPS locations of all stations;
 - c. Documentation of quality assurance and control procedures;
 - d. Analysis that shall include calculation of the metrics used in the CSBP;
 - e. Comparison of mean biological and habitat assessment metric values between stations and year-to-year trends;
 - f. Electronic data formatted to the California Department of Fish and Game Aquatic Bioassessment Laboratory for inclusion in the Statewide Access Bioassessment Database; and

⁵ California Stream Bioassessment Procedure (Protocol Brief for Biological and Physical/Habitat Assessment in Wadeable Streams), California Department of Fish and Game - Aquatic Bioassessment Laboratory, May 1999. Located at www.dfg.ca.gov/cabw/protocols.html.

- g. Copies of all QA/AC documents from laboratories.

J. Water Quality Based Program

1. By **1 April 2003**, the Discharger shall submit the following water quality based programs for approval by the Executive Officer: Pesticide Plan, and Characterization Report Plan.
2. Pesticides Monitoring, which will be is described in more detail as part of the Pesticides Plan of this Order, shall be conducted as part of the receiving water and urban runoff monitoring efforts. The purpose of pesticides monitoring is to:
 - a. Monitor trends in the levels of diazinon and chlorpyrifos in all 303(d) listed waters within the Discharger's jurisdictions. Sampling must take place, at a minimum, in one storm event during the dormant spray application season, one storm event following the dormant spray application season, and once during dry season;
 - b. Monitor potential sources of diazinon and chlorpyrifos outside residential and commercial land areas, including discharges from agricultural areas and nurseries upstream or within the Discharger's jurisdictional boundaries; and
 - c. Monitor toxicity in storm water through the use of bioassay tests. Any toxicity found shall be evaluated by using TIE procedures, or as otherwise appropriate.

III. SPECIAL STUDIES

A. Peak Discharge Impact Study

The Discharger shall conduct a study to determine the extent of erosion of natural stream channels and banks caused by urbanization. If appropriate, the Discharger shall evaluate peak flow control and determine numeric criteria to prevent or minimize erosion of natural stream channels and banks caused by urbanization.⁶ The Discharger shall submit a work plan by **1 April 2004**.

B. BMP Effectiveness Study

The Discharger shall conduct or participate in studies to evaluate the effectiveness of structural and treatment control BMPs. The objective of this study shall include the following:

1. Monitor the reduction of pollutants of concern in storm water (including,

⁶ Order No. 5-02-XXX (Development Standards) requires the development of numerical criteria for peak flow control in natural drainage systems.

but not limited to: trash, suspended sediment, pathogen indicators, nutrients, heavy metals, and oil and grease) from five or more different types of BMPs that have been properly installed within the year preceding monitoring. Monitoring shall be continued until the effectiveness of the BMP can be determined;

2. Evaluate the requirements, feasibility and cost of maintenance for each BMP;
3. Develop recommendations for appropriate BMPs for the reduction of pollutants of concern in storm water in Modesto Area.

IV. **Standard Monitoring Provisions**

All monitoring activities shall meet the following requirements:

A. **Monitoring and Records [40 CFR 122.41(j)(1)]**

Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

B. **Monitoring and Records [40 CFR 122.41(j)(2)] [California Water Code §13383(a)]**

The Discharger shall retain records of all monitoring information, including all calibration and maintenance of monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the Report of Waste Discharge and application for this Order, for a period of at least five (5) years from the date of the sample, measurement, report, or application. This period may be extended by request of the Regional Board or U.S. EPA at any time and shall be extended during the course of any unresolved litigation regarding this discharge.

C. **Monitoring and Records [40 CFR 122.21(j)(3)]. Records of monitoring information shall include:**

1. Date, location, and time of sampling or measurements;
2. Individual(s) who performed the sampling or measurements;
3. Date analyses were performed;
4. Individual(s) who performed the analyses;
5. The analytical techniques or methods used; and
6. Results of such analyses.

D. **Monitoring and Records [40 CFR 122.21(j)(4)]**

All sampling, sample preservation, and analyses must be conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified

in this Order.

E. Monitoring and Records [40 CFR 122.21(j)(5)]

The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this Order shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than two years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by both.

F. All chemical, bacteriological, and toxicity analyses shall be conducted at a laboratory certified for such analyses by an appropriate governmental regulatory agency.

G. For priority toxic pollutants that are identified in the CTR (65 Fed. Reg. 31682), the MLs published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California - 2000 (SIP) shall be used for all analyses, unless otherwise specified. Appendix 4 of the SIP is included as Table 2. For pollutants not contained in Appendix 4 of the SIP, the test method and method detection limit (MDL) listed in Table 2 shall be used for all analyses, and the ML for these parameters shall be lower than or equal to the lowest applicable water quality criteria from the Basin Plan and/or the Ocean Plan.

H. The Monitoring Report shall specify the analytical method used, the MDL and the ML for each pollutant. For the purpose of reporting compliance with numerical limitations, performance goals, and receiving water limitations, analytical data shall be reported with one of the following methods, as appropriate:

1. An actual numerical value for sample results greater than or equal to the ML;
2. "Not-detected (ND)" for sample results less than the laboratory's MDL with the MDL indicated for the analytical method used; or
3. "Detected, but Not Quantified (DNQ)" if results are greater than or equal to the laboratory's MDL but less than the ML. The estimated chemical concentration of the sample shall also be reported. This is the concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

I. For priority toxic pollutants, if the Discharger can demonstrate that a particular ML is not attainable, in accordance with procedures set forth in 40 CFR 136, the lowest quantifiable concentration of the lowest calibration standard analyzed by a specific analytical procedure (assuming that all the method specified sample weights, volumes, and processing steps have been followed) may be used instead of the ML listed in Appendix 4 of the SIP. The Discharger must submit documentation from the

laboratory to the Regional Board Executive Officer for approval prior to raising the ML for any constituent.

J. Monitoring Reports [40 CFR 122.41(I)(4)(ii)]

If the Discharger monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR part 136, unless otherwise specified in the Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the annual Monitoring Reports.

K. Monitoring Reports [40 CFR 122.41(I)(4)(iii)]

Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this Order.

L. If no flow occurred during the reporting period, the Monitoring Report shall so state.

M. The Regional Board Executive Officer or the Regional Board, consistent with 40 CFR 122.41, may approve changes to the Monitoring Program, after providing the opportunity for public comment, either:

1. By petition of the Discharger or by petition of interested parties after the submittal of the annual Monitoring Report. Such petition shall be filed not later than 60 days after the Monitoring Report submittal date, or
2. As deemed necessary by the Regional Board Executive Officer following notice to the Discharger.

Ordered by: _____
GARY M. CARLTON, Executive Officer

Date

TABLE 2
LIST OF CONSTITUENTS FOR THE STORM WATER
MONITORING PROGRAM AND ASSOCIATED MINIMUM LEVELS (MLs)¹

CONSTITUENTS	MLs
CONVENTIONAL POLLUTANTS	mg/L
Oil and Grease	5
Total Phenols	0.1
Cyanide	0.005
Ph	0 - 14
Temperature	None
Dissolved Oxygen	Sensitivity to 5 mg/L
BACTERIA	
Total coliform	<20mpn/100ml
Fecal coliform	<20mpn/100ml
Enterococcus (marine waters)	<20mpn/100ml
E. coli (fresh waters)	
GENERAL	mg/L
Dissolved Phosphorus	0.05
Total Phosphorus	0.05
Turbidity	0.1NTU
Total Suspended Solids	2
Total Dissolved Solids	2
Volatile Suspended Solids	2
Total Organic Carbon	1
Total Petroleum Hydrocarbon	5
Biochemical Oxygen Demand	2
Chemical Oxygen Demand	20-900
Total Ammonia-Nitrogen	0.1
Total Kjeldahl Nitrogen	0.1
Nitrate-Nitrite	0.1
Alkalinity	2
Specific Conductance	1umho/cm
Total Hardness	2
MBAS	0.5
Chloride	2
Fluoride	0.1
Methyl tertiary butyl ether (MTBE)	1
METALS	µg/L
Aluminum	100

¹ For Priority Pollutants, the MLs represent the lowest value listed in Appendix 4 of SIP. MDLs must be lower than or equal to the ML value. If a particular ML is not attainable in accordance with procedures set forth in 40 CFR 136, the lowest quantifiable concentration of the lowest calibration standard analyzed by a specific analytical procedure may be used instead.

TABLE 2
CITY OF MODESTO
MUNICIPAL SEPARATE STORM SEWER SYSTEM
STANISLAUS COUNTY

-2-

Antimony	0.5
Arsenic	1
Beryllium	0.5
Cadmium	0.25
Chromium (total)	0.5
Copper	0.5
Hex. Chromium	5
Iron	100
Lead	0.5
Mercury	0.5
Nickel	1
Selenium	1
Silver	0.25
Thallium	1
Zinc	1
SEMIVOLATILE ORGANIC COMPOUNDS	µg/L
Acids	
2-Chlorophenol	2
2, 4-Dichlorophenol	1
2,4-Dimethylphenol	2
2, 4-Dinitrophenol	5
2-Nitrophenol	10
4-Nitrophenol	5
4-Chloro-3-methylphenol	1
Pentachlorophenol	2
Phenol	1
2,4,6-Trichlorophenol	10
BASE/NEUTRAL	µg/L
Acenaphthene	1
Acenaphthylene	2
Anthracene	2
Benzidine	5
1,2 Benzanthracene	5
Benzo(a)pyrene	2
Benzo(g,h,i)perylene	5
3,4 Benzoflouranthene	10
Benzo(k)flouranthene	2
Bis(2-Chloroethoxy) methane	5
Bis(2-Chloroisopropyl) ether	2
Bis(2-Chloroethyl) ether	1
Bis(2-Ethylhexyl) phthalate	5
4-Bromophenyl phenyl ether	5
Butyl benzyl phthalate	10

TABLE 2
CITY OF MODESTO
MUNICIPAL SEPARATE STORM SEWER SYSTEM
STANISLAUS COUNTY

2-Chloroethyl vinyl ether	1
2-Chloronaphthalene	10
4-Chlorophenyl phenyl ether	5
Chrysene	5
Dibenzo(a,h)anthracene	0.1
1,3-Dichlorobenzene	1
1,4-Dichlorobenzene	1
1,2-Dichlorobenzene	1
3,3-Dichlorobenzidine	5
Diethyl phthalate	2
Dimethyl phthalate	2
di-n-Butyl phthalate	10
2,4-Dinitrotoluene	5
2,6-Dinitrotoluene	5
4,6 Dinitro-2-methylphenol	5
1,2-Diphenylhydrazine	1
di-n-Octyl phthalate	10
Fluoranthene	0.05
Fluorene	0.1
Hexachlorobenzene	1
Hexachlorobutadiene	1
Hexachloro-cyclopentadiene	5
Hexachloroethane	1
Indeno(1,2,3-cd)pyrene	0.05
Isophorone	1
Naphthalene	0.2
Nitrobenzene	1
N-Nitroso-dimethyl amine	5
N-Nitroso-diphenyl amine	1
N-Nitroso-di-n-propyl amine	5
Phenanthrene	0.05
Pyrene	0.05
1,2,4-Trichlorobenzene	1
CHLORINATED PESTICIDES	µg/L
Aldrin	0.005
alpha-BHC	0.01
beta-BHC	0.005
delta-BHC	0.005
gamma-BHC (lindane)	0.02
alpha-chlordane	0.1
gamma-chlordane	0.1
4,4'-DDD	0.05
4,4'-DDE	0.05
4,4'-DDT	0.01
Dieldrin	0.01
alpha-Endosulfan	0.02

TABLE 2
CITY OF MODESTO
MUNICIPAL SEPARATE STORM SEWER SYSTEM
STANISLAUS COUNTY

beta-Endosulfan	0.01
Endosulfan sulfate	0.05
Endrin	0.01
Endrin aldehyde	0.01
Heptachlor	0.01
Heptachlor Epoxide	0.01
Toxaphene	0.5
Polychlorinated Biphenyls	µg/L
Aroclor-1016	0.5
Aroclor-1221	0.5
Aroclor-1232	0.5
Aroclor-1242	0.5
Aroclor-1248	0.5
Aroclor-1254	0.5
Aroclor-1260	0.5
ORGANOPHOSPHATE PESTICIDES	µg/L
Chlorpyrifos	0.05
Diazinon	0.01
Prometryn	2
Atrazine	2
Simazine	2
Cyanazine	2
Malathion	1
HERBICIDES	µg/L
Glyphosate	5
2,4-D	0.02
2,4,5-TP-SILVEX	0.2

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION**

ORDER NO. R5-2002-XXX

NPDES NO. CA0083526

ATTACHMENT B - REPORTING FORMAT

**CITY OF MODESTO
STORM WATER DISCHARGES FROM
MUNICIPAL SEPARATE STORM SEWER SYSTEM
STANISLAUS COUNTY**

ATTACHMENT B - REPORTING FORMAT
ORDER NO. R5-2002-XXX
CITY OF MODESTO
MUNICIPAL SEPARATE STORM SEWER SYSTEM
STANISLAUS COUNTY

-1-

This form summarizes the requirements in Order No. R5-2002-XXX. The Discharger must complete this form in its entirety. Report only activities that were performed during the previous fiscal year. Attachments should be included where necessary to provide sufficient information on program implementation.

The goals of this Report are to: 1) Accurately document implementation of the Storm Water Management Plan (SWMP) during the past fiscal year; 2) Evaluate program results for continuous improvement; 3) Determine compliance with Order R5-2002-XXX; and 4) Share this information with other municipal decision makers and the public.

!	YOU MUST FILL OUT ALL THE INFORMATION REQUESTED <i>Do not leave any of the sections blank.</i>
N/A	If the question does not apply to your municipality, please indicate N/A in the space provided and provide a brief explanation
U	If the information requested is currently unavailable, please indicate U in the space provided and give a brief explanation.

This Report Form consists of the following sections:

SECTION	PAGE
I. Program Management	2-4
II. Report of Water Quality Exceedance	5
III. SWMP Implementation	5-6
IV. SW MP Elements	7
IV.A. Public Outreach Public Education Program	7-12
IV.B. Industrial/Commercial Facilities Program	13-15
IV.C. Development Standards (DS) Program	16-20
IV.D. Construction Program	21-22
IV.E. Municipal Program	23-31
IV.F. IC/ID Elimination Program	32-35
V. Monitoring	36
VI. Assessment of Program Effectiveness	36
VII. Certification	37

Reporting Year 200__ - 200__

I. Program Management

A. Permittee Name: _____

B. Permittee Program Supervisor: _____

Title:

Address:

City:

Zip Code:

Phone:

Fax:

C. In the space below, briefly describe how the storm water program is coordinated within your agency's departments and divisions. Include a description of any problems with coordination between departments. To facilitate this, complete Table 1.

--

TABLE 1 - Program Management

Storm Water Management Activity	Division/Department	# of Individuals Responsible for Implementation
1. Outreach & Education		
2. Industrial/Commercial Inspections		
3. Construction Permits/Inspections		
4. IC/ID Inspections		
5. Street sweeping		
6. Catch Basin Cleaning		
7. Spill Response		
8. Development Standards Program (Dev. plan review and approval)		
9. Trash Collection		

D. Staff and Training

Attach a summary of staff training over the last fiscal year. This shall include the staff name, department, type of training, and date of training.

E. Budget Summary

1. Does your municipality have a storm water utility? Yes ☐ No ☐
If no, describe the funding source(s) used to implement the requirements of Order No. R5-2002-XXX.

--

2. Are the existing financial resources sufficient to accomplish all required activities? Yes ☐ No ☐
3. Complete Table 2 to the extent that accurate information is available. Indicate U in the spaces where the information is unavailable. Report any supplemental dedicated budgets for the same categories on the lines below the table.
4. List any additional state/federally funded projects related to storm water.

--

TABLE 2

Program Element	Expenditures in Previous Fiscal Year	Est. Amount Needed to implement Order R5-2002-XXX
1. Program management a. Administrative costs b. Capital costs		
2. Public Outreach/Public Education a. Public Outreach/Education b. Employee Training c. Business Outreach		
3. Industrial/Commercial Inspection Activities		
4. Development Standards		
5. Construction Program a. Construction inspections		
6. Municipal Program a. Maintenance of structural and treatment control BMPs b. Municipal street sweeping c. Catch basin cleaning d. Trash collection/recycling e. Capital costs f. Other		
7. IC/ID Program a. Operations and Maintenance b. Capitol Costs		
8. Monitoring		
9. Other		
10. TOTAL		

List any supplemental dedicated budgets for the above categories:

--

List any activities that have been contracted out to consultants/other agencies:

--

II. Report of Water Quality Exceedance (RWQE)

- A. Are you aware, or have you been notified, of any discharges from your MS4 that cause or contribute to a condition of nuisance or to the violation of any applicable water quality standards? Yes ☐ No ☐
- B. Has the Regional Board notified you that discharges from your MS4 are causing or contributing to an exceedance of water quality standards? Yes ☐ No ☐
- C. If you answered Yes to either of the above questions, you must attach a RWQE Report. The Report must include the following:
1. A description of the pollutants that are in exceedance and an analysis of possible sources;
 2. A plan to comply with the RWQE;
 3. Changes to the RWQE to eliminate water quality exceedances;
 4. Enhanced monitoring to demonstrate compliance; and
 5. Results of implementation.

III. SWMP Implementation

- A. Has your agency implemented the SWMP and any additional controls necessary to reduce the discharges of pollutants in storm water to the maximum extent practicable? Yes ☐ No ☐
- B. In the box below, describe additional or different controls other than those specified in the SWMP, which your agency has implemented to reduce pollutants in storm water to the maximum extent practicable.

--

C. Storm Water Ordinance

1. Have you adopted a storm water and urban runoff ordinance to enforce all requirements of Order No. R5-2002-XXX? Yes ☐ No ☐
If not, describe the status of adopting such an ordinance.
2. If yes, have you already submitted a copy of the ordinance to the Regional Board? Yes ☐ No ☐
If not, please attach a copy to this Report.
3. Were any amendments made to your storm water ordinance during the last fiscal year? Yes ☐ No ☐
If yes, attach a copy of amendments to this Report.

D. Discharge Prohibitions

1. List any non-storm water discharges you feel should be further regulated:
2. List any non-storm water discharges you feel should be exempt, and provide an explanation for each:

IV. SWMP Elements

A. Public Outreach Program

In addition to answering the following questions, attach a summary of all storm water education activities that your agency conducted or participated in last year.

1. No Dumping Message

- a) How many storm drain inlets does your agency own?
- b) How many storm drain inlets were marked with a no dumping message in the last fiscal year?
- c) What is the total number of storm drain inlets that are legibly marked with a no dumping message?

If this number is less than the number in question 1.b, describe why all inlets have not been marked, the process used to implement this requirement, and the expected completion date.

- d) How many public access points to creeks, channels, and other water bodies within your jurisdiction have been posted with no dumping signage in the past year?

Describe your agency's status of implementing this requirement by the date required in Order No. R5-2002-XXX.

2. Reporting Hotline

- a) Has your agency established its own hotline for reporting and for general storm water management information? Yes ☐ No ☐
- b) If so, what is the number?
- c) Is this information listed in the government pages of the telephone book? Yes ☐ No ☐
- d) If not, is your agency coordinated with the other Permittee hotline? Yes ☐ No ☐
- e) Do you keep record of the number of calls received and how they were responded to? Yes ☐ No ☐
- f) How many calls were received in the last fiscal year?
- g) Describe the process used to respond to hotline calls.
- h) Have you provided the other Permittee with your current reporting contact information? Yes ☐ No ☐
- i) Have you compiled a list of the general public reporting contacts and posted it on your web site? Yes ☐ No ☐
If not, when is this scheduled to occur?

3. Outreach and Education

- a) Describe the strategy developed to provide outreach and bilingual materials to target ethnic communities. Include an explanation of why each community was chosen as a target, how program effectiveness will be determined, and status of implementation.
- b) Approximately how many impressions were made last year on the general public about storm water quality via print, local TV, local radio, or other media?
- c) Describe efforts your agency made to educate local schools on storm water pollution.

- d) Did you provide all schools within each school district in the Modesto Urbanized Area with materials necessary to educate a minimum of 50 percent of all school children (K-12) every two years on storm water pollution?

Yes ☐ No ☐

If not, explain why.

- e) Describe the strategy developed to measure the effectiveness of in-school educational programs, including assessing students' knowledge of storm water pollution problems and solutions before and after educational efforts.

For Permit Years 2-5, attach an assessment of the effectiveness of in-school storm water education programs.

- f) What is the behavioral change target that was developed based on sociological data and other studies?

If no target has been developed, explain why and describe the status of developing a target.

What is the status of meeting the target by the end of Year 5?

4. Pollutant-Specific Outreach

- a) Did your agency develop specific outreach programs to target pollutants in your area? Yes ☐ No ☐
- b) Did your agency help distribute pollutant-specific materials in your area? Yes ☐ No ☐
- c) Describe how your agency has made outreach material available to the general public, schools, community groups, contractors and developers, etc...

5. Businesses Outreach Program

- a) Briefly describe the Business Outreach Program that has been developed to target gas stations and restaurant chains.

- b) How many business owners/operators did your agency reach last year?

- c) Is your agency meeting the requirement of reaching all gas station and restaurant corporations once every two years? Yes ☐ No ☐
If not, describe measures that will be taken to fully implement this requirement.

- d) Has your agency developed and/or implemented a Business Assistance Program? Yes ☐ No ☐
If so, briefly describe your agency's program, including the number of businesses assisted, the type of assistance, and an assessment of the program's effectiveness.

6. Did you encourage local radio stations and newspapers to use public service announcements? Yes ☐ No ☐
How many media outlets were contacted?
Which newspapers or radio stations ran them?

Who was the audience?
7. Did you work with local business to place non-traditional advertising? Yes ☐ No ☐
If so, describe the type of advertising.
|
8. Did you establish local community partnerships to distribute educational storm water pollution prevention material?
Describe the materials that were distributed: Yes ☐ No ☐
| Yes ☐ No ☐
Who were the key partners?
9. Did you participate in or publicize workshops or community events to discuss storm water pollution?
10. Does your agency have a website that provides storm water pollution prevention information?
If so, what is the address?
11. Has awareness increased in your community regarding storm water pollution?
Do you feel that behaviors have changed? Yes ☐ No ☐
Explain the basis for your answers. Include a description of any evaluation methods that are used to determine the effectiveness of your agency's outreach.
| Yes ☐ No ☐
12. How would you modify the storm water public education program to improve it on the City level?

B. Industrial/Commercial Facilities Program

1. Pollutant Source Inventory Database

Did you (individually or jointly) update the Database for Pollutant Sources Inventory?

Yes ☐

No ☐

Comments/Explanation/Conclusion
:

2. Inspection Program

Provide the reporting data as suggested in the following tables.

Category	Initial Number of Facilities at the start of cycle proposed for inspection by categories (after the initial year, the updated number based on the new data)	Number of facilities inspected in the current reporting year	% Completed at the time of this report for present cycle (from the initial value, and from the updated value after first cycle)	Total number since permit adoption
Landfills				
TSDF				
...				
Comments/Explanation/Conclusion:				

ATTACHMENT B - REPORTING FORMAT
ORDER NO. R5-2002-XXX
CITY OF MODESTO AND COUNTY OF SAN JOAQUIN
MUNICIPAL SEPARATE STORM SEWER SYSTEM
SAN JOAQUIN COUNTY

3. BMPs Implementation

Provide the reporting data as suggested in the following table.

Category	Number of facilities inspected by category in this reporting year	Number of facilities identified as adequately implementing BMPs as specified in this reporting year	% adequately implementing in this reporting year	Number of facilities required to implement or upgrade in this reporting year	Number of facilities inspected by category in this reporting cycle	Number of facilities identified as adequately implementing BMPs as specified in this reporting cycle	% adequately implementing out of total in this reporting cycle	Number of facilities required to implement or upgrade in this reporting cycle	Total Number during this permit adequately implementing	Total Number during this permit required to implement or upgrade
Landfills										
...										

Comments/Explanation/Conclusion
:

4. Enforcement Activities

Provide the reporting data as suggested in the following tables.

Enforcement Actions by categories (e.g. Warning letter, NOV, referral to DA, RB, etc.)	Number of facilities issued enforcement actions in the current reporting year	Number of facilities issued enforcement actions in the current reporting cycle	Number of facilities re-inspected due to enforcement actions in current reporting year	Number of facilities re-inspected due to enforcement actions in current reporting cycle	Number of facilities brought into compliance in the current reporting year	Number of facilities brought into compliance in current reporting cycle	Total number of enforcement actions since permit adoption (by category)

Facilities by category	Number of Warning letters	Number of NOV's	Number of Referral	Number of Other Enforcement Actions
Comments/Explanation/Conclusion:				

5. Program Implementation Effectiveness Assessment

Please give a brief assessment of the implementation of the program in removing pollutants from storm water discharges. Please provide an explanation. Suggested improvements or adjustments based on the knowledge gained through this reporting period activities must be reflected in a change in the SWMP, if warranted.

Highly Effective ☐

Somewhat Effective ☐

Non-effective ☐

Comments/Explanation/Conclusion
:

6. You must also submit quarterly an electronic copy of your Industrial/Commercial Facilities Program activities.

C. Development Standards Program

1. Does your agency have a process to minimize impacts from storm water and urban runoff on the biological integrity of natural drainage systems and water bodies in accordance with requirements under CEQA, Section 404 of the CWA, local ordinances, and other legal authorities? Yes ☐ No ☐
Attach examples showing how storm water quality impacts were addressed in environmental documents for projects over the past year.
2. Does your agency have procedures to include the following requirements in all priority development and redevelopment projects:
 - a) Maximize the percentage of permeable surfaces to allow more percolation of storm water into the ground? Yes ☐ No ☐
 - b) Minimize the quantity of storm water directed to impermeable surfaces and the MS4? Yes ☐ No ☐
 - c) Minimize pollution emanating from parking lots through the use of appropriate treatment control BMPs and good housekeeping practices? Yes ☐ No ☐
 - d) Provide for appropriate permanent measures to reduce storm water pollutant loads from the development site? Yes ☐ No ☐
3. List the types and numbers of BMPs that your agency required for priority projects to meet the requirements described above.

--

4. Describe the status of the development or implementation of peak flow controls in Natural Drainage Systems.

--

5. Has your agency amended codes and/or ordinances to give legal effect to the Development Standards changes required in the Permit? Yes ☐ No ☐
6. Describe the process your agency uses to include Development Standards design criteria in new development and redevelopment project approvals.

--

7. How many of the following projects did your agency review and condition to meet Development Standards requirements last year?
- a) Residential
 - b) Commercial
 - c) Industrial
 - d) Automotive Service Facilities
 - e) Retail Gasoline Outlets
 - f) Restaurants
 - g) Parking Lots
 - h) Projects located in or directly adjacent to or discharging directly to an environmentally sensitive area
 - i) Total number of permits issued to priority projects
8. What is the percentage of total development projects that were conditioned to meet Development Standards requirements? %
9. How has your agency prepared to reduce the Development Standards threshold for industrial/commercial facilities to 1 acre from 100,000 square feet in 2003?

--

10. After 2003, how many additional projects per year will require/did require implementation of Development Standards requirements as a result of the lower threshold?
11. Does your agency participate in an approved regional or sub-regional storm water mitigation program to substitute in part or wholly Development Standards requirements for new development? Yes ☐ No ☐
12. Has your agency modified its planning procedures to prepare and review CEQA documents to consider potential storm water quality impacts and provide for appropriate mitigation? Yes ☐ No ☐

If no, provide an explanation and an expected date of completion.

13. Did your agency update any of the following General Plan elements in the past year?
- a) Land Use Yes ☐ No ☐
- b) Housing Yes ☐ No ☐
- c) Conservation Yes ☐ No ☐
- d) Open Space Yes ☐ No ☐
- If yes, please describe how watershed and storm water quality and quantity management considerations were included.

14. How many targeted staff were trained last year?
15. How many targeted staff are trained annually?
16. What percentage of total staff are trained annually? %
17. Has your agency developed and made available development planning guidelines in conformance with the Development Standards? Yes ☐ No ☐
18. If not, what is the expected date that guidelines will be developed and available to developers?
19. Is your agency preparing a technical manual for siting and design of BMPs for the development community?

--

D. Construction Program

1. Describe your agency's program to control runoff from construction activity at all construction sites within its jurisdiction.

2. Does your agency require the preparation, submittal, and implementation of a Local Storm Water Pollution Prevention Plan (Local SWPPP) prior to the issuance of a grading permit for all sites that meet one or all of the following criteria?

a) Will result in soil disturbance of one acre or greater Yes ☐ No ☐

b) Is within, directly adjacent to, or is discharging directly to an environmentally sensitive area Yes ☐ No ☐

3. Attach one example of a local SWPPP
4. Describe the process your agency uses to require proof of filing a Notice of Intent for coverage under the State General Construction Activity Storm Water Permit (General Construction Permit) and a certification that a SWPPP has been prepared prior to issuing a grading permit?

5. If applicable, how many building/grading permits were issued to sites requiring Local SWPPPs last year?
6. How many building/grading permits were issued to sites requiring coverage under the General Construction Permit last year?
7. How many building/grading permits were issued to construction site less than one acre in size last year?
8. How many construction sites were inspected during the last wet season?
9. Complete the table below.

Type of Violation	# of Violations	% of Total Inspections	# of Follow-up Inspections	# of Enforcement Actions
Off-site discharge of sediment				
Off-site discharge of other pollutants				
No or inadequate SWPPP				
Inadequate BMP/SWPPP implementation				

10. Describe the process for taking enforcement actions against construction site violations, including the types of actions that are taken.

11. Describe the system that your agency uses to track the issuance of grading permits.

E. Municipal Program

1. Sewage System Maintenance, Overflow, and Spill Prevention
(only applicable to agencies that own and/or operate a sanitary
sewer system)

- a) Has your agency developed and implemented a response plan for sanitary sewer overflows that includes the requirements in Order No. R5-2002-XXX? Yes ☐ No ☐
- b) How many sanitary sewer overflows occurred within your jurisdiction?
- c) How many did your agency respond to?
- d) Did your agency investigate all complaints received? Yes ☐ No ☐
- e) How many complaints were received?
- f) Upon notification, did your agency immediately respond to overflows by containment? Yes ☐ No ☐
- g) Did your agency notify appropriate sewer and public health agencies when a sewer overflowed to the MS4? Yes ☐ No ☐
- h) Did your agency implement a program to prevent sewage spills or leaks from sewage facilities from entering the MS4? Yes ☐ No ☐
- If so, describe the program:

|

- i) Did your agency implement a program to identify, repair, and remediate sanitary sewer blockages, exfiltration, overflow, and wet weather overflows from sanitary sewers to the MS4? Yes ☐ No ☐
If so, describe the program:

2. Public Construction Activities Management

- a) What percentage of public construction sites 5 acres or greater did your agency obtain coverage under the General Construction Permit? %
- b) Give an explanation for any sites greater than 5 acres that were not covered:

- c) What is the total number of active public construction sites?
How many were 5 acres or greater?
- d) (After March, 2003) Did your agency obtain coverage under the General Construction Permit for public construction sites one acre or greater? Yes ☐ No ☐

3. Vehicle Maintenance/Material Storage Facilities/Corporation Yards Management

- a) Did your agency implement pollution prevention plans for each public vehicle maintenance facility, material storage facility, and corporation yard? Yes ☐ No ☐

- b) Briefly describe how your agency implements the following, and any additional, BMPs to minimize pollutant discharges in storm water:

- (1) Good housekeeping practices
- (2) Material storage control
- (3) Vehicle leaks and spill control
- (4) Illicit discharge control

- c) Are all Permittee owned and/or operated vehicle/equipment wash areas self-contained, covered, equipped with a clarifier, and properly connected to the sanitary sewer?

Yes ☐ No ☐

If not, what is the status of implementing this requirement?

- d) How many Permittee owned and/or operated vehicle/equipment wash areas are scheduled to be redeveloped to include the BMPs listed above?

4. Landscape and Recreational Facilities Management

- a) Has your agency developed a standardized protocol for the routine and non-routine application of pesticides, herbicides (including pre-emergents), and fertilizers?

Yes ☐ No ☐

Briefly describe this protocol:

- b) How does your agency ensure that there is no application of pesticides or fertilizers immediately before, during, or immediately after a rain event or when water is flowing off the area to be applied?

- c) Are any banned pesticides, herbicides, fungicides, or rodenticides stored or applied in your agency's jurisdiction that you know of?

Yes ☐ No ☐

If so, list them:

- d) What percentage of your agency's staff that apply pesticides are certified by the California Department of Food and Agriculture, or are under the direct supervision of a certified pesticide applicator?
- e) Describe procedures your agency has implemented to encourage retention and planting of native vegetation and to reduce water, fertilizer, and pesticide needs:

5. Storm Drain Operation and Management

- a) Did your agency designate catch basin inlets within its jurisdiction? Yes ☐ No ☐
- b) How many of each designation exist in your jurisdiction?
 - Priority A:
 - Priority B:
 - Priority C:

- c) How many times were all Priority A basins cleaned last year?
- d) How many times were all Priority B basins cleaned last year?
- e) How many times were all Priority C basins cleaned last year?
- f) How much total waste was collected in tons from catch basin clean-outs last year?
- g) Attach a record of all catch basins in your jurisdiction. For all basins that are owned and operated by your agency, include dates that each was cleaned out over the past year.
- h) Did your agency place and maintain trash receptacles at all transit stops within its jurisdiction. Yes ☐ No ☐
- i) How many new trash receptacles were installed last year?
- j) Did your agency place special conditions for events that generated substantial quantities of trash and litter including provisions that:
 - (1) Provide for the proper management of trash and litter generated from the event? Yes ☐ No ☐
 - (2) Arrange for temporary screens to be placed on catch basins? Yes ☐ No ☐
 - (3) Require catch basins in that area to be cleaned out subsequent to the event and prior to any rain? Yes ☐ No ☐
- k) Did your agency inspect the legibility of the catch basin stencil or labels? Yes ☐ No ☐
What percentage of stencils was legible?

l) Were illegible stencils recorded and re-stenciled or re-labeled within 180 days of inspection? Yes ☐ No ☐

m) Did your agency visually monitor Permittee-owned open channel storm drains and other drainage structures for debris at least annually and identify and prioritize problem areas of illicit discharge for regular inspection? Yes ☐ No ☐
Is the prioritization attached? Yes ☐ No ☐

n) Did your agency review its maintenance activities to assure that appropriate storm water BMPs are being utilized to protect water quality? Yes ☐ No ☐
What changes have been made?

o) Did your agency remove trash and debris from open channel storm drains a minimum of once per year before the storm season? Yes ☐ No ☐

p) How did your agency minimize the discharge of contaminants during MS4 maintenance and clean outs?

q) Where is removed material disposed of?

6. Streets and Roads Maintenance

- a) Did your agency designate streets and/or street segments within its jurisdiction?

Yes ☐ No ☐

Please provide detail information regarding designation and frequency of cleaning.

- b) Did your agency perform all street sweeping in compliance with the permit?

Yes ☐ No ☐

Please provide detail information regarding designation and frequency of cleaning.

- c) Did your agency require that saw cutting wastes be recovered and disposed of properly and that in no case shall waste be left on a roadway or allowed to enter the storm drain? Yes ☐ No ☐
- d) Did your agency require that concrete and other street and road maintenance materials and wastes be managed to prevent pollutant discharges? Yes ☐ No ☐
- e) Did your agency require that the washout of concrete trucks and chutes only occur in designated areas and never into storm drains, open ditches, streets, or catch basins leading to the storm drain system? Yes ☐ No ☐
- f) Did your agency train its employees in targeted positions (whose interactions, jobs, and activities affect storm water quality) regarding the requirements of the storm water management program to:
- (1) Promote a clear understanding of the potential for maintenance activities to pollute storm water? And Yes ☐ No ☐
- (2) Identify and select appropriate BMPs? Yes ☐ No ☐

7. Parking Facilities Management

- a) Did your agency ensure that Permittee-owned parking lots be kept clear of debris and excessive oil buildup and cleaned no less than 2 times per month and/or inspected no less than 2 times per month to determine if cleaning is necessary. Yes ☐ No ☐
- b) Were any Permittee-owned parking lots cleaned less than once a month? Yes ☐ No ☐
How many?

8. Municipal Program

- a) Did your agency, for all municipal activity considered an industrial activity under U.S. EPA Phase I storm water regulations, obtain separate coverage under the State of California General Industrial Activities Storm Water Discharge Permit no later than 31 December 2001? Yes ☐ No ☐
- b) Does your agency serve a population of less than 100,000 people? Yes ☐ No ☐

9. Emergency Procedures

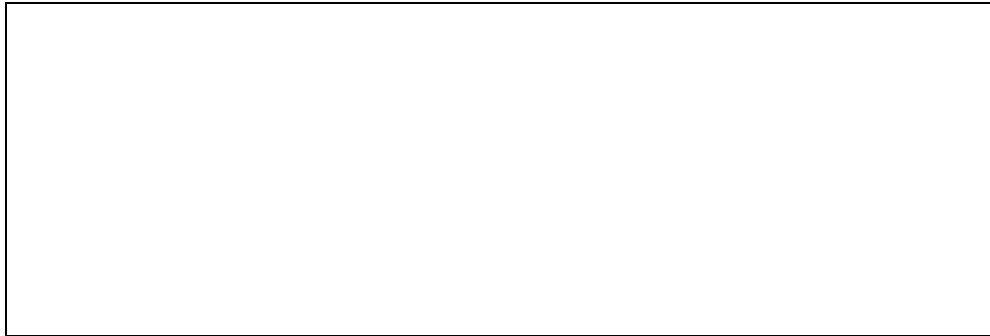
- a) In case of real emergencies, did your agency repair essential public services and infrastructure in a manner to minimize environmental damage? Yes ☐ No ☐
- b) Were BMPs implemented to the extent that measures did not compromise public health and safety? Yes ☐ No ☐

10. Feasibility Study

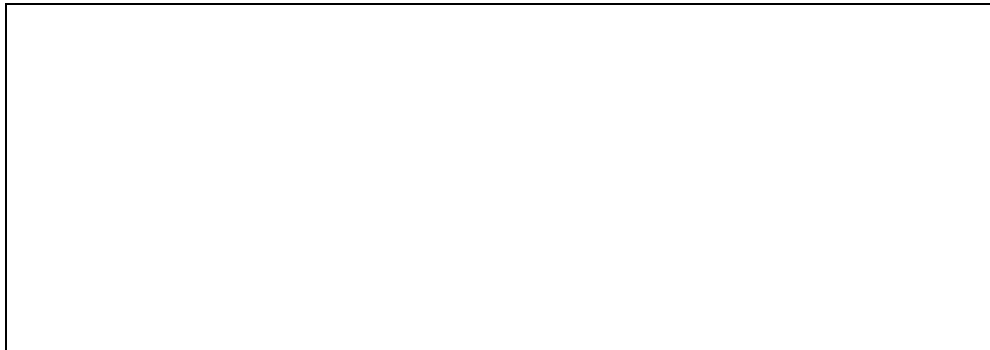
- a) Did your agency investigate the possible diversion of dry weather flows or the use of alternative treatment control BMPs? Yes ☐ No ☐
- b) Did your agency review its individual prioritized list submit a listing of priority diversions to the Regional Board Executive Officer? Yes ☐ No ☐

F. Illicit Connections and Illicit Discharges (IC/ID) Elimination

1. Attach a copy of your agency's IC/ID Elimination Implementation Program
2. Attach a map of your storm drain system showing all permitted connections (if available), and the locations of all illicit connections and discharges that occurred last year. If your agency has not completed this requirement, describe the status of the development of a baseline map, including an expected completion date.



3. Describe your enforcement procedures for eliminating illicit discharges and terminating illicit connections.



4. Describe your record keeping system to document all illicit connections and discharges.

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5. What is the total length of open channel that your agency owns and operates?
6. What length was screened last year for illicit connections?
7. What is the total length of closed storm drain that your agency owns and operates?
8. What length was screened last year for illicit connections?
9. Describe the method used to screen your storm drains.

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10. Provide the reporting data for illicit connections as suggested in the following table (you may submit a spreadsheet from your database that contains the information).

Year	Total No. Reported/ Identified	Total No. Investigated	No. of exempt discharges or NPDES permitted	No. of illicit discharges terminated	Number of connections removed	No. of enforcement actions	No. of <i>other</i> actions
02/03							
03/04							
04/05							
05/06							
06/07							

11. Explain any *other* actions that occurred in the last year.

12. What is the average time it takes your agency to initiate an illicit connection investigation after it is reported?

- a) Were all identified connections terminated within 180 days?

Yes ☐ No ☐

- b) If not, explain why.

13. Provide the reporting data for illicit discharges as suggested in the following table (you may submit a spreadsheet from you database that contains this information).

Year	Total number reported	Number of source IDed, discontinued, cleaned up voluntarily or through enforcement	Number of source not IDed, but cleaned up	No. that resulted in no evidence of discharge	No. of conditionall y exempt	No. exempt or in compliance and source identified	Number of enforce-ment action
02/03							
03/04							
04/05							
05/06							
06/07							

14. What is the average response time after an illicit discharge is reported?

a) Did any response times exceed 72 hours? Yes ☐ No ☐

b) If yes, explain why.

15. Describe the your agency's spill response procedures.

16. What would you do differently to improve your agency's IC/ID Elimination Program?



17. Attach a list of all permitted connections to your storm sewer system.

V. Monitoring and Reporting Requirements

Briefly describe any storm water monitoring activities that are not required by Order No. R5-2002-XXX that your municipality conducted, participated in, or received funding to conduct in the past fiscal year. These activities should correspond with the dollar amount you listed in Table 2.

When reporting data, the Permittee shall arrange the information in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner as to illustrate clearly the compliance with this Order.

Sampling Station	Sampling Date	Constituent 1 Concentration	Constituent 2 Concentration	Constituent 'n' Concentration
↓	↓	↓	↓	↓

As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all reports and work plans shall be prepared by a registered professional or their subordinate and signed by the registered professional.

VI. Assessment of Program Effectiveness

- A. Attach a summary of the effectiveness of your storm water management program. This summary should include, at a minimum, the following:
1. An assessment of your agency's compliance with permit requirements, based on your responses to the questions in this form;
 2. Descriptions of any evaluation methods that your agency uses to determine the effectiveness of your storm water management program;
 3. A summary of the strengths and weaknesses of your agency's storm water management program;
 4. A list of specific program highlights and accomplishments;
 5. A description of water quality improvements or degradation in your watershed over the past fiscal year;
 6. Interagency coordination between agencies to improve the storm water management program;

7. Future plans to improve your agency's storm water management program;
and
 8. Suggestions to improve the effectiveness of your program.
- B. List any suggestions your agency has for improving program reporting and assessment.

VII. Certification Statement

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted.

Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility, of a fine and imprisonment for knowing violations.

Executed on the ___ day of _____, 20__.

at _____.

Printed Name _____ Title _____

(Signature) _____

Signature by duly authorized representative